FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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Poultry Survey Committee Predicts:

15c Broilers Due; Turkeys to Dip; Eggs Steady, Lower

CHICAGO — Modest recovery in broiler prices from the all-time lows recorded early this month is in the nearby outlook of the Poultry Survey Committee. But, as the four-member board sees the forward situation in its quarterly report out this week, average U.S. prices in the remaining two quarters of the year probably will not go beyond what many producers consider to be the cost of production, about 15¢ lb. There's a chance, however, for broiler prices to exceed the break-even point in the first half of 1962.

The committee of four top college poultry economists expects egg prices to average about 35-36¢ doz. during the July-September quarter, which would be about the same as a year earlier, but when the final quarter of the year — October-December — rolls around, prices of 6-7¢ under those of the comparable period of 1960 are likely. Egg prices in the first half of 1962 are expected to average 32-33¢ doz., 2-3¢ under those recorded January-June, 1961.

Primarily because about 25% more pounds of turkey than last year will be available for this year's Thanks-

(Turn to **SURVEY**, page 99)

Alabama Poultry Plant Bought by Pillsbury Co.

MINNEAPOLIS — The Pillsbury Co. has signed a contract to acquire the land and buildings of a poultry processing plant at Guntersville, Ala., from the city's Industrial Development Board, according to Dean McNeal, executive vice president. Terms of the contract were not disclosed.

Mr. McNeal said plans call for opening the processing plant shortly

(Turn to **POULTRY PLANT**, page 8)

AFMA Research Award To Dr. Roy S. Emery

MADISON, WIS. — Dr. Roy S. Emery, assistant professor of dairy husbandry, Michigan State University, is the 1961 recipient of American Feed Manufacturers Assn.'s $1,000 award for outstanding research in dairy cattle nutrition.

Dr. Emery was selected for this honor by the American Dairy Science Assn., and was presented with the award by Dr. J. Wesley Nelson, chairman of the AFMA Nutrition Council and director of research, Nutrena Mills, Minneapolis. The presentation

(Turn to **AWARD**, page 99)

Poultry, Feed Trades More Optimistic as Broiler Prices Gain

ATLANTA — The broiler market turned for the better this week which led poultrymen and feed men alike to feel more optimistic. Prices continued upward, with most offerings being paid 1¢ lb. more than last week. June 15 prices ranged from 12 to 13¢ for the second consecutive day.

Reports from Arkansas, Alabama and other southern states also reflected the Georgia prices. Vast interest on the part of buyers was re-

(Turn to **BROILERS**, page 8)

Purina Buys Interest In Italian Feed Firm

ST. LOUIS—The Ralston Purina Co. has acquired half interest in an existing Italian feed company. The new company is to be known as Globo-Purina, according to an announcement by Donald Danforth, chairman of the board of the Ralston Purina Co.

The feed manufacturing plant is at Treviso, Italy. Terms of the transaction were not divulged.

FEEDSTUFFS *Features This Week*

ENVIRONMENT CONTROL FOR PIGS—A Georgia farrowing house features air blending to control humidity. **Page 18.**

RUMINANT RATIONS—The development of high energy rations for ruminant animals is discussed on **page 26.**

EUROPEAN SWINE PRODUCTION—Some observations on European swine production are presented on **page 40.**

BARLEY FOR TURKEYS—The value of pelleted barley for turkeys is the subject of an article appearing on **page 52.**

NEW CANADIAN MILL—Features of the first all-steel feed mill in Canada are discussed in this article. **Page 64.**

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Egg, Dairy Marketing Topics Get Attention at Eastern Event

By JAMES W. MILLER
Feedstuffs Staff

KIAMESHA LAKE, N.Y.—Increasing net returns to egg producers and the pros and cons of milk quotas and a national milk sanitation act drew the attention of the Eastern Federation of Feed Merchants which convened at the Concord Hotel here June 11-13.

In addition to end product marketing, the feedmen heard a direct report on the food and drug law and the Delaney clause; messages of good salesmanship from two of the country's leading exponents of selling techniques, and a talk on the new frontiers in dairy nutrition.

The famous Catskill resort proved to be not only a good spot for convention activities, extra-curricular and otherwise, but also was an appropriate place to discuss market-

(Turn to **EASTERN**, page 103)

Canada's Growing Feed Trade Hopes To Avoid Unsound Expansion and Credit

By PAUL L. DITTEMORE
Feedstuffs Staff

POINTE AU PIC, QUEBEC—Canada's steadily growing formula feed manufacturing industry hopes to avoid the pitfalls which seem to be common to most expanding industries—unsound expansion and unsound credit policies.

If the 1961 convention of the Canadian Feed Manufacturers Assn. had a general "theme," that theme or motto was "planned progress." The meeting was held at Manoir Richelieu, a resort hotel in this village situated on Murray Bay in "La Belle Province." The setting was ideal for business and for pleasure, too. That's the Canadian way of holding a con-

(Turn to **CANADA**, page 104)

'Cowculator' Figures Dairy Feeding Rate

BALTIMORE—An electronic "Cowculator"—designed to show how much concentrate a dairyman should feed his cows to make the most profit—has been developed by Dr. C. D. Caskey, director of feed research for Cooperative Mills, Inc.

Cooperative Mills is owned by five farmer cooperatives which operate in a 12-state area. They are: Southern States Cooperative, Richmond, Va.; Cotton Producers Assn., Atlanta; Farm Bureau Cooperative Assn., Columbus, Ohio; Farmers Cooperative Exchange, Raleigh, N.C.; and the Pennsylvania Farm Bureau Cooperative Association, Harrisburg, Pa.

The "Cowculator" — now in the process of being patented — "uses proven formulas to provide accurate information on nutrients that can be fed economically, based on the selling price of milk and the cost of concentrate," the cooperative states. "It places more emphasis on the all-im-

(Turn to **'COWCULATOR,'** page 8)

House Unit Okays Feed Law Renewal

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — A House subcommittee on agriculture this week approved a renewal of the feed grain program for another year. The bill is now subject to consideration and approval by the full House Agriculture Committee. Such approval is expected.

This measure—an amendment to Title 1 of the omnibus bill covering the broad administration farm proposal—will not be available in final form until July 1, when the committee takes up the omnibus bill.

The introduction of this amend-

(Turn to **RENEWAL**, page 4)

Seek Ways to Keep Grain Moving on Tennessee River

By Special Correspondent

DECATUR, ALA. — Temporary measures were being considered this week to relieve the transportation crisis on the Tennessee River caused by the collapse of a wall in the locks of Wheeler Dam near here, Tennessee Valley Authority officials said. The collapse tied up shipping on the river, principal source of transportation for

(Turn to **RIVER**, page 99)

C. B. Fretwell, Founder Of Spartan Grain & Mill Co., Dies

SPARTANBURG, S.C.—C. B. Fretwell, 73, founder of the Spartan Grain & Mill Co. in 1914, and chairman of its board of directors, died at his home June 8.

C. B. Fretwell

Mr. Fretwell was active in industry affairs, and for more than 25 years was a director of the American Feed Manufacturers Assn. He served as vice chairman of the AFMA board in 1959-60. He was also active in civic organizations.

His son, B. A. Fretwell, is presi-

(Turn to **DEATH**, page 8)

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Top of the Hopper

SOME INTERESTING RESULTS were turned up by Croplife, one of our publication stablemates, in a survey of the fertilizer industry. "Despite the 3,889,256 acres signed up (at the time of the survey) to be diverted in the government's feed grain program, a number of respondents said that their 1961 tonnage was better than that of 1960, some as high as 10 to 15% greater. Another observation was that higher analyses are being made throughout the trade. Thus, plant nutrient consumption can remain high even if gross tonnage may fall off some."

This study appears to bear out the opinions of some grain market observers that corn yields could be pushed up by heavy fertilization and possibly offset to a considerable degree the effects of the acreage cutback.

OPTIMISM IS GROWING among some poultry people in the South that Orville Freeman, secretary of agriculture, is backing away from objectionable portions of the omnibus farm bill (or ominous bill, as many citizens on both sides of the Mason-Dixon Line, have come to regard it).

One of the indications came when Mr. Freeman agreed to some changes, one being elimination of consideration of a farmer's "personal" growing history as well as a farm history in setting up allotments, especially for tobacco growers. The tobacco people were hot against this proposal.

Some poultry people returning to the South from the hearings felt that the whole administration omnibus bill would be rewritten by the Senate Agriculture Committee in order to make it more acceptable to Congress. They point out that Agriculture Committeeman Harold D. Cooley has indicated he will head up a similar effort in the House to bring out a "clean bill."

Southerners who have fought the bill, and asked that poultry products be exempt from its provisions, are still keeping fingers crossed, but they feel better over chances of some major changes in the measure.

THE NATIONAL CORN GROWERS ASSN. is one of the supporters of the omnibus farm bill but it professes some reasons for lending its support that appear to reflect a philosophy quite different from that of most of the legislation's backers, who, for the most part, are identified with high-support, strict control convictions.

The association says that opponents of the bill appear to take the attitude that farmers are not qualified to make positive contributions to programs relating to their own products. "It would appear that the bill's opponents fear they would lose, if the bill passes, their power to dominate future plans—that perhaps they would be by-passed for the opinions of some real 'farmers.'

"We believe this would be good and we believe it would be possible that such real 'farmers'—if equipped with the facts—might decide that they wanted no government support programs. They might decide that they have their own supply-demand-marketing-public relations problems in hand, and are ready to take normal risks and, hence, be entitled to enjoy the rewards that could come to them from open and free marketing procedures."

The NCGA is a relatively new organization. Established in Iowa in 1957, it recently hired an executive manager, issued its first "National Corn Letter" and is conducting a drive for associate members as well as grower members.

THE BEEF TENDERIZING PROCESS announced last fall by Swift & Co. is getting off to an auspicious start. Reducing the chewiness of meat offered by Swift is accomplished by introducing a food enzyme (papain) into the circulatory system of the animal just before it is killed. A Minneapolis food editor was impressed enough with the product to write recently that

(Turn to **TOP OF THE HOPPER**, page 99)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Feed business throughout the nation continued at a steady, high volume this week. One exception to the steady pace is the Ohio Valley where there was a noticeable pick-up in volume after several months of slow business.

Broiler, turkey and chick feeds are accounting for high volume in the industry. Hog feeds continue to be a bright spot in the swine raising areas. Low turkey and broiler prices are a cause for concern among feed men.

Price lists are steady to slightly lower.

The wholesale feedstuff price index dropped 1.1 points to 83.2 this week. However, it is still 9.4 points above a year before.

The feed-grain index went down to 63.7 this week and was 3.6 points under a year ago. The hog-corn ratio, on the basis of Chicago prices, was 14.5 this week. This compared with 14.7 last week and 13.9 a year ago.

(Major feed market review and ingredient quotations appear on pages 100-102.)

Northwest

Feed business in the Northwest this week was generally on the level of a week ago, and that was a very good level. One feed manufacturer voiced extreme concern over the present low level of turkey prices.

Moving in the best volume were the turkey, chick, broiler and hog feeds, according to the manufacturers contacted. Mill running time was holding steady for all manufacturers.

Price lists for the various firms will be about the same to down slightly. Most of the down movement of prices is in the concentrate lines, due to lower protein prices.

One feed man volunteered the thought that soybean meal has reached its low point.

Southwest

Formula feed business in the Southwest was about unchanged from the previous week; however, there are indications that the wheat harvest in the area is hurting mixed feed business.

Recent rains have kept pastures in excellent condition and dairy and cattle feed business is feeling the effect of this.

Hog, turkey and broiler rations continue to provide the major portion of the total volume. Broiler prices are still extremely poor and far under cost figures even for efficient producers. No immediate change in this picture is evident.

While running time continues to be on a good five day level most trade sources indicate the volume is slightly reduced from the previous week.

Southeast

Formula feed business in the Southeast continues to be reported as about unchanged. Hot weather and lack of rain in many areas are hurting pastures which is causing a fairly good demand for cattle and dairy feeds.

Broiler feed manufacturers' running time is still above normal. Prices paid for broilers advanced ½¢ lb., to 11¢ to 11½¢ lb., f.o.b. the farm, however good and bad growers continue to operate at a loss and several have gone broke. Many do not look for much improvement in the very near future.

Northeast

The shift from dairy to poultry demand continued as formula feed sales in general held steady with the previous week.

Egg mashes, growing feeds and turkey feeds gave a good account of themselves. The 14% protein feed used to supplement the diet of grass-fed cows chalked up good tonnage. Broiler feeds lagged.

Broiler prices rallied 1 to 1½¢ lb. but it's not known whether the higher prices will hold. But even the improvement presented a dismal picture when compared with year-ago prices.

The egg market remained "no good," with declines registered again, especially in the smaller sizes. On-the-farm prices of large white eggs in the western New York area were down to 30 to 33¢ doz. and small sizes were quoted at 16½ to 19½¢.

Running time of some formula feed manufacturers held at 36 hours last week, unchanged from the preceding period.

Central States

This month so far has been a most satisfactory one from the standpoint of volume of sales of formula feeds. As of now, it looks very much as though it will be fully as good as May and some firms are running ahead of a year ago.

Prices have been trimmed a little as a reflection of the sell-off in soybean meal, particularly. Contrary to what happens on occasion when prices have been cut even moderately, the demand has held up remarkably well. Everyone seems to be operating on a full 40 hour week or slightly better.

The demand appears to apply to the entire line. Hog feed has been moving very readily. However, there is some general expectation that call for broiler feeds will taper off within the next 60 days. So far, the demand from that source has been very well maintained. Turkey feeds are moving in excellent shape.

South Central

Formula feed demand slowed a little this week and there was no easy explanation available. For the first time in several months there were reports that sales were no better than those of the year ago period.

Mill operations fell short of a five-day total at a number of plants but the loss in production time was held to a day or less. One feed man said, "We are doing a pretty fair amount of business, for this time of the year, but production ran ahead of shipments for several days in a row and we just had to take a breather until we could get our warehouse back in shape."

Hog feeds, both supplements and pig rations, continue to lead in overall shipments. Plants that emphasize mixing concentrates report a steady movement on these items. Turkey feed is going well, too, with a heavier volume ahead.

Ohio Valley

For the first time in several months, area feed manufacturers report this week that a definite upturn in orders

(Turn to **MARKETS**, page 105)

Specialists at Peter Hand evaluate latest scientific developments—even operate a 450-acre farm where new formulations are tested on a commercial scale.

Now Has Improved Vitamin A and D_3 with even greater stability. Peter Hand Proven Premix packages contain vitamins, antibiotics, anti-oxidents. 1 bag fortifies 1 ton. Available for poultry, swine, ruminants.

Feed manufacturer saves $35,000 a year with Peter Hand Premixes

If there ever was a feed manufacturer who could do his own vitamin pre-mixing, this was the fellow. He was geared for volume and employed experienced mill men.

But he discovered that Peter Hand Premixes are more economical in the long run—for three reasons. First, the specialized personnel and equipment that are needed added to his operating overhead. Second, because his production people were not used to handling micro-ingredients, he found feeds coming off his line dangerously underfortified at some times, expensively overfortified at others. And finally in this particular case, the 2% saving in shrinkage and handling was translated into thousands of dollars over the course of a year.

How much can *you* save by specifying Peter Hand products? That depends on what you make and how much business you do. The man to work out the arithmetic is your Peter Hand representative. Call him in and ask him to show how premium quality Peter Hand Premixes cost less than the do-it-yourself variety.

PETER HAND'S *"RED TAPE"* SAVES YOU TIME, TROUBLE AND MONEY

Peter Hand assays every ingredient used in every product. After samples are taken, containers are sealed with a distinctive red tape. This red tape cannot be removed until the assay verifies quality... your *100% guarantee* that Peter Hand premixes, vitamins, fortifiers and medications meet specifications that have been established.

Look for the answer first Peter Hand *from Peter Hand Research*

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Turkey Kill Peaks; Prices Fall 1-2½c

NEW YORK—A substantial seasonal advance in marketings of both new crop and old turkeys pushed this week's slaughter to the year's peak level and dropped farm prices to low levels. Minnesota, a major turkey state, reported that June 14 turkey prices were 1-2½¢ lb. below a week earlier. Breeders absorbed the maximum loss, while other classes dropped mostly 1-2¢.

Live-weight prices at Minnesota farms June 14 were: Young hens, mostly 19¢; young toms, 18-19¢; fryers-roasters, mostly 18¢, and breeders, mostly 14¢.

The U.S. Department of Agriculture said processing was confined largely to fryer-roasters and yearlings. Movement of breeder hens was reduced because of most flocks having been liquidated.

BROILERS: Even though slaughter activity continued heavy as plants operated at near capacity and live supplies were generally adequate, paying prices for broilers advanced 1¢ in Georgia and in Delmarva this week.

At the close of the June 8-14 reporting period, the Georgia price advanced 1¢ to the 12¢ level. But prices in other major southern producing states continued unchanged at mostly 11¢.

USDA said the current volume of birds processed appears to be in good relationship with earlier chick placements. No backlog of marketable sizes was evident.

EGGS: Rather sharp declines in egg prices were reported in the Northeast where values were as much as 3¢ lower on large to 1¢ lower on smaller sizes. Demand was reported to be better in the Southeast, but midwestern consuming centers reported a dull market.

Dairy Science Leaders Feted at ADSA Event

MADISON, WIS.—Dr. C. F. Huffman, professor of dairy husbandry at Michigan State University, was among dairy science leaders honored at the 56th annual meeting of the American Dairy Science Assn. in Madison.

Dr. Huffman received the ADSA award of honor, which is the highest recognition given by the national association. He has devoted 39 years to dairy cattle nutrition research and education. With tthe exception of one year, when he completed his Ph.D. degree at the University of Wisconsin, all of Dr. Huffman's work has been at Michigan State.

His wide research interests have centered around mineral metabolism, evaluation of feeds and rumen physiology. More than 20 students have received their doctorate degrees under his direction and he has had over 125 papers published in scientific journals. In 1957 he served as president of the ADSA.

Also honored was Dr. Ralph E. Erb, professor of dairy science at Washington State University. Dr. Erb received the $1,000 Borden award in dairy production.

Dr. Erb, who has been at Washington State since 1947, received his M.S. and Ph.D. degrees at Purdue University.

Feed Executive Dies

HATTIESBURG, MISS.—Edward P. (Bully) Arnold, 44, president of the A & R Feed Mill in Hattiesburg, died recently after suffering a heart attack while playing golf.

Mr. Arnold was a life-long resident of Hattiesburg. He was a graduate of Mississippi Southern College at Hattiesburg and received his M.S. degree from the University of Alabama.

ARKANSAS POULTRY PRINCESS—Miss Mickey Lambert of El Dorado, Ark., was named 1961-62 Arkansas Poultry Princess at the State Poultry Festival in Little Rock recently. Selected at a $50-a-plate dinner, Miss Lambert will represent the state in the Miss Universe Pageant at Miami Beach, Fla., July 7-16.

Crown Poultry Princess At Arkansas Festival

LITTLE ROCK, ARK.—A record of 959 officials and boosters of Arkansas' $130 million a year poultry industry attended the coronation banquet to climax the second annual State Poultry Festival here.

Highlight of the $50-a-plate dinner program was the selection of Miss Mickey Lambert of El Dorado as the 1961-62 Arkansas Poultry Princess. The 20-year-old student nurse will represent the state in the Miss Universe Pageant at Miami Beach, Fla., July 7-16.

Among other highlights of the banquet were naming of the poultry industry's "Man of the Year" award and announcement of new officers for the Arkansas Poultry Federation, sponsor of the State Poultry Festival.

Bill Simmons, outgoing president from Siloam Springs, won the "Man of the Year" award for his outstanding contributions to the state poultry industry. The presentation was made by Jerry Hinshaw of Springdale, last

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'MAN OF THE YEAR'—Bill Simmons, right, outgoing president of the Arkansas Poultry Federation, was presented the poultry industry's "Man of the Year" award at the group's second annual State Poultry Festival, held recently in Little Rock. Making the presentation was J. E. Hinshaw of Springdale, who was last year's winner of the award. Mr. Hinshaw is the new federation president.

To Report Maryland Layer Feeding Work

COLLEGE PARK, MD.—Reports on University of Maryland egg production research, including feeding studies, will be presented at the first annual Maryland Egg Field Day, to be held June 29 at the university's poultry farm.

The morning program, starting at 10 a.m., will include an introduction to the Maryland layer research program and a tour of research facilities. Research projects include protein (amino acid) needs of high producing layers, improved protein efficiency with fish meal, use of fat to increase early egg size and possible critical depletion of nutrients of hens during laying year.

Other work to be discussed includes research on egg shell quality as affected by calcium and phosphorus levels, factors influencing incidence of blood spots, effect of temperature on egg shell quality, role of zinc in reproduction of chickens and cage vs. floor pen results.

Discussions of egg laws and the future of the Maryland egg industry will conclude the program in the afternoon, according to Thomas M. Stabler, extension poultryman.

Cargill to Rebuild Its Duluth Elevator

MINNEAPOLIS — Cargill, Inc., closed its Duluth elevator facility June 16 for renovation and rebuilding. Cargill Duluth Elevator is scheduled to reopen April 1, 1962, with almost completely new facilities, according to announcement by the firm. Capacity of the elevator will be 3 million bushels.

After the renovation and rebuilding project the export base will be the "fastest loading and unloading facility at the head of the lakes," according to Walter B. Saunders, vice president in charge of the grain division of Cargill.

Parts of the present facility date back to the 1880's and there are actually a number of elevators and annexes. Demolition of the old portions is to begin immediately.

New steel headhouses, new dock, deeper channel to accommodate the largest vessels coming through the St. Lawrence Seaway, two high speed truck dumps and high speed car dumper are included in the plans.

RENEWAL

(Continued from page 1)

ment action, to renew the feed grain program with an addition to the omnibus bill, may be discerned as an adroit move on the part of the administration to win support for Title 1 of the omnibus bill, which has steadily fallen into bad favor with the Congress.

However, despite the implied adroitness of the government managers, it now appears that the feed grain renewal bill and another measure, a wheat bill, are likely to gain congressional approval. But before that occurs, both of these appendages to the original omnibus bill will have to be taken out of the unpopular Title 1 and submitted as separate measures for Congress to approve.

The proposed feed grain program renewal is not much different from the existing law.

Barley Added

Such changes that are made include the addition of barley to coverage of the program, which now includes corn and grain sorghums. In the present law, corn and sorghums are subject to acreage cutbacks as a measure of eligibility for price support.

While barley has been added as a feed grain subject to acreage controls to obtain price support, there is no cross compliance in the case of barley. That commodity would be eligible for price support if the producers of that crop did not increase their acreage above their acreage base in the 1959-60 crop years. However, they would be permitted or encouraged to reduce that acreage, and if that condition occurred on barley acreage, the producers would obtain the same rates of payment now available for corn and grain sorghums—50% in cash, based on the normal yields of their land, for the first 20% cutback from their base acreage. For an additional cutback of 20%, producers who took this additional step would be compensated at the rate of 60% of the normal yields of these crops on their land, but payment would be made only in kind.

It is understood that the new feed grain bill will provide only for payments in kind for all crops, but this report cannot be verified in the absence of a bill which is now unlikely to be available before July 1.

The attempt on the part of USDA in the feed grain bill renewal to provide a 10% bonus for participation in the new feed grain program for the next crop year if the same land were again taken out of production, failed to gain House sub-committee approval.

Would Sell Grain

Another important aspect of the hearings on the feed grain law renewal was a statement made by the Commodity Stabilization committee associate director, Edwin Jaenke. He told the House committee that USDA would sell feed grains in the open market later to compensate itself for the cost of the feed grain program.

This is estimated to be about $500 million, which would mean that in terms of corn it would amount to slightly more than 500 million bushels.

Previously Secretary Freeman has told Congress that the cost of the feed grain program for its first year would amount to about $1.5 billion but that he would recapture a half billion through open market sales of corn obtained under the program through the issuance of certificates to producers who complied with the program up to 20% of their base acreage in cutback.

Later a USDA official raised market havoc when he allegedly told Congress that he planned to sell corn in the open market to force corn producers to cooperate in the feed grain acreage cutback program.

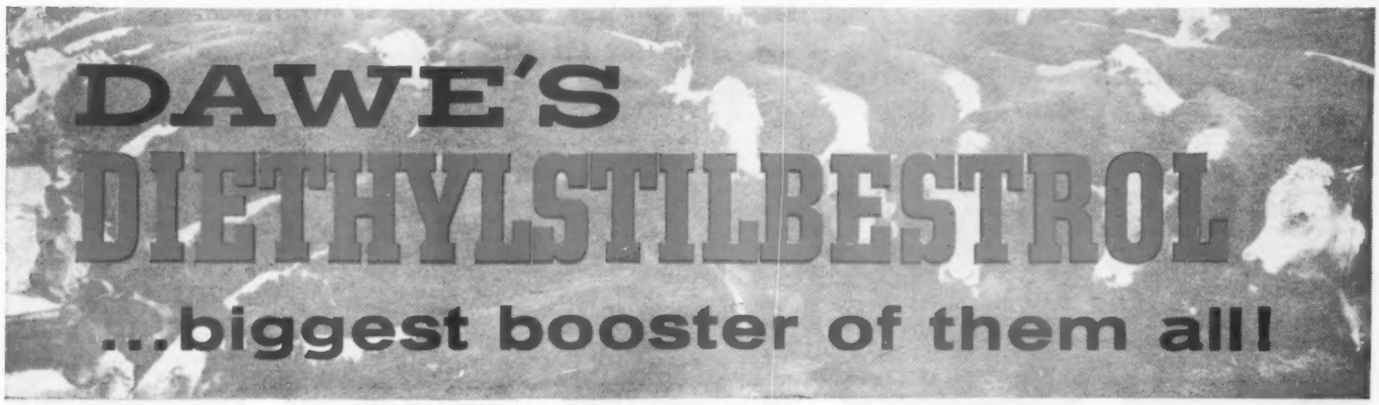
Liberal Figures

Testimony of USDA officials before the House sub-committee here this week indicates that USDA may have been very liberal in authorizing participation at reported yield levels as ascertained from local farmers. It must appear that, in the absence of official records, USDA has taken the top figures submitted by producers as to the yields they may have attained in their 1959-60 base period.

USDA has been reporting a most favorable level of participation of both corn and sorghum farmers in the feed grain program for the first year, but trade sources are not yet willing to concede the spectacular success USDA forecasts until the July 10 crop report is available. This will give the first accurate showing of actual acreage for both corn and sorghums.

Will Act as Brake

However, the trade attitude is now that even with some latitude in regard to the USDA optimism in regard to corn and sorghum acreage cutback this year, it seems likely that the sale of CCC stocks of corn to meet requirements to compensate for the cost of the program will act as a brake on the corn market, and there seems little reason to believe that there can be any sustained price run-up in corn between now and next May.



BOOSTS
feed mill profits

—because it gives feed manufacturers the best sales story they have ever had to tell cattle feeders. Reports to the American Society of Animal Production indicate that diethylstilbestrol is worth $7.00 per head to feeders (see Bulletin below). In six years' time, it has gained such acceptance that 80% of all beef cattle marketed now receive it.

BOOSTS
feed performance

—high-grain rations and high-roughage rations alike. Diethylstilbestrol is *not* a substitute for feed. Cattlemen must continue to feed a balanced ration for good results. But the addition of Dawe's Diethylstilbestrol Premix *does* boost the ability of any ration to produce gains.

BOOSTS
gains 14% on 10% less feed

—according to the average of diethylstilbestrol tests that have now continued for more than six years, with thousands of cattle and many different rations. Dawe's Diethylstilbestrol Premix is manufactured and sold under license granted by Iowa State University Research Foundation, Inc., under its U. S. Patent No. 2751303.

BULLETIN!

May 31, 1961—Latest diethylstilbestrol test results released today at Iowa Cattle Feeders Day show 9.1% improvement in feed conversion. Yearling steers, fed a supplement containing diethylstilbestrol in dry lot for 139 days, returned approximately *$9 more profit per animal* than those not receiving it.

Diethylstilbestrol Premix is one product in Dawe's complete line of beef cattle feed additives:

Fixtay (Vitamin A) *Choline Chloride* *Dawenzyme*
Vitamin D *Fixtay-Dee* *Trace Minerals*

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DAWE'S LABORATORIES, INC.
4800 SOUTH RICHMOND STREET, CHICAGO 32, ILLINOIS

WORLD'S OLDEST AND LARGEST SPECIALISTS IN FEED FORTIFICATION

Studies on Feeding, Breeding, Carcass Reported at Ohio Event

By Dr. Earle W. Klosterman
Ohio State University

COLUMBUS, OHIO — Results of breeding, feeding and carcass evaluation experiments were presented at the Ohio Beef Cattle Day held in the new animal science building at Ohio State University June 13.

General theme of the day was the effects of breeding and feeding upon carcass value. Carcasses with detailed slaughter data from three experiments were displayed in the new meat laboratory. Results of feeding experiments still in progress were also presented.

SILAGE ADDITIONS PROVE BENEFICIAL—Previous research at the Ohio station has indicated that the high feeding value of whole plant and ground ear corn silages may be related to their content of organic acids. It was also found that the amounts of acetic and lactic acids in these silages could be markedly increased by the addition of a neutralizing material at the time of ensiling. Cattle feeding experiments conducted during 1959-60 showed a definite increase in feeding value of whole plant silage treated with limestone and urea and also ground ear corn silage treated with limestone and additional water. The increased feeding value of the limestone-urea treated whole plant silage appeared to be due to the increased organic acids or some factors other than the crude protein supplied by urea, since adequate amounts of soybean meal were fed with both the treated and control silages.

Experiments are currently in progress to further compare ear corn and whole plant silages treated with 0.5% each of urea and high calcium ground limestone to similar materials ensiled without treatment. In these experiments the silages are fed with different levels of soybean meal. Cattle fed the lower levels of soybean meal and treated silage have gained at a faster rate than those fed the same amount of protein with untreated silage and fully as fast as those fed larger amounts of soybean meal. These results indicate that additions of urea and limestone to corn silages not only increase the organic acids produced in the silage but that the added urea may replace a part of the protein supplement which needs to be fed.

SOYBRAN FLAKES HAVE HIGH ENERGY VALUE — Soybran flakes are primarily the seed coat of soybeans and are, therefore, high in cellulose. However, digestion experiments have shown this cellulose to be highly digestible. Thus, soybran flakes would be considered a roughage according to chemical composition but a higher energy material as far as digestibility is concerned. For these reasons, an experiment with wintering Hereford heifer calves was conducted to determine the feeding value of this product when: (1) it was used to replace an equivalent weight of roughage, and (2) when it was used to replace an equal weight of ground ear corn.

Four lots of heifers were fed a hay, hay-crop silage and limited corn ration for 137 days. When soybran flakes replaced the ground ear corn, heifers gained 10% faster and when they replaced an equivalent weight of dry matter from hay and silage they gained 18% faster. Results of this experiment indicate that the feeding value of soybran flakes is more nearly the same as the grains rather than the roughages even though they are high in cellulose.

Soybran flakes are somewhat laxative as shown by the consistency of the feces of the heifers to which they were fed. Even so, these heifers gained faster than those not fed this product. These results suggest that the consistency of the feces, as a single observation, may not be a good indicator of how well cattle are gaining.

VALUE OF CORN STEEPWATER IN A 32% SUPPLEMENT—Preliminary results of a comparison of two 32% supplements were presented. One supplement was formulated with soybean meal and the other with corn steepwater and urea as the main sources of crude protein. To date, cattle fed the steepwater supplement have gained slightly more than those fed the supplement containing soybean meal. However, they have also eaten more ground ear corn so that there has been little difference in amount of feed required per unit of gain.

CORN SILAGE OR GROUND EAR CORN FULL-FED AT DIFFERENT STAGES OF GROWTH AND FATTENING—The American consumer wants lean, tender, flavorful meat with a minimum of fat. These demands are difficult to satisfy. In order to meet all requirements it is necessary that cattle be fattened. Research with sheep and swine has shown that the most lean and the least waste fat is produced by liberal feeding during growth and somewhat limited feeding during fattening. Current beef production procedures are often the opposite. Many cattle are grown largely on roughage and then fattened on high concentrate rations just prior to slaughter.

This experiment was initiated with 475 lb. steer calves. A 252-day feeding period is divided into three peri-

(Turn to OHIO, page 104)

MISS ARKANSAS CHIC — Carolyn Kay Adair, a shapely blond from Dumas, Ark., who was recently named "Miss Arkansas Chic," will host the Arkansas Drumstick Party at the National Jaycee convention June 19-22 in Atlanta, Ga. The oversized drumstick Carolyn is holding is just a sample of the 20,000 that will be served by the Arkansas delegation, according to Achel Hardcastle of Springdale, who is state party chairman. The drumstick party is financed by the Arkansas poultry industry and is given by the Arkansas Jaycees in tribute to Arkansas' second largest industry.

BROILERS PAY FIDDLER AT ATLANTA BALL

ATLANTA — With the price of broilers at a new all-time low, Atlanta restaurants and supermarkets are having a "ball" in promoting specials.

Some eateries are offering one half fried chicken with all the trimmings for $1. At least one has this special: A quarter of a chicken, two vegetables and dessert—80¢.

An Atlanta cafeteria proclaims on Saturday nights: "Come and get an order of two pieces for only 25¢!" Another cafeteria offers a quarter bird for 49¢.

Supermarkets, using large type in grocery ads, streamers in windows and "sandwich" boards out front, are offering whole fryers for 19¢ lb.

Southern Control Group Elects F. S. Carr

LEXINGTON, KY.—F. S. Carr of Atlanta, Ga., was elected president of the Association of Southern Feed, Fertilizer & Pesticide Control Officials at the group's annual meeting in Lexington.

Henry DeSalvo of Little Rock, Ark., was named vice president. Maurice B. Rowe of Richmond, Va., continues as secretary-treasurer.

Gene Triggs of Mississippi was elected chairman of the executive committee. John L. Reitzel of North Carolina, Reed McDonald of Texas and Mr. Triggs were named to the executive committee, and Clyde A. Bower of Oklahoma continues on the committee.

The association's meeting next year will be held in North Carolina, with the exact location and date to be set later.

Ira F. East Heads New General Mills Region

MINNEAPOLIS—Ira F. East, Jr., an employee of General Mills, Inc., for nine years, has been named regional sales manager of the newly-created central region of the company's feed division, it was announced by E. J. Slevin, director of sales for the division.

Ira F. East, Jr.

The central region, with offices in Indianapolis, includes Indiana, Michigan, portions of Illinois, Kentucky and western Ohio. The feed division now has nine sales regions.

Mr. East has been serving as feed sales supervisor in Kansas City for the past six years. Before that he was in sales work in Fayetteville, Ark., Piggott, Ark., and Marshall, Mo. He is a 1949 graduate of Central Missouri State College of Warrensburg, Mo.

W. G. Stokes and Robert White have been named district sales managers under Mr. East in Indianapolis. Mr. Stokes will be responsible for Michigan and Mr. White for the rest of the region. Each will have a sales force in the field.

AVI Offers Debentures

ST. LOUIS — Recently announced was the filing by Arkansas Valley Industries, Inc., of $1.5 million of convertible subordinated sinking fund debentures due 1976. The price is 100% of the principal amount.

AVI is an integrated feed and poultry firm at Dardanelle, Ark. The underwriter is A. G. Edwards & Sons, St. Louis.

The proceeds, the announcement said, will be for new facilities, marketing improvements and working capital.

Retaliatory Tax On Florida Citrus Asked in Georgia

ATLANTA—A retaliatory tax on certain citrus products brought into Georgia from Florida has been requested here because Florida has not acted upon Georgia's request for repeal of a tax on Georgia poultry, according to Phil Campbell, Georgia Department of Agriculture commissioner.

The commissioner, taking advantage of a 1945 law on the books, asked for a 10¢ per box tax on oranges, grapefruit, tangerines and kumquats brought into the state.

He said he was taking this action because Florida's legislature adjourned last week without acting upon a request of Georgia's poultry industry for repeal of the inspection fee and wing-tagging of poultry. He said the 1945 law leaves him no alternative but to request Gov. Ernest Vandiver to levy the tax. "It is with regret that I have had to take this action," he said.

Cost $325,000

State officials and poultrymen recently appealed to the Florida officials to eliminate the tax and wing-tag because of the hardships and expense to the state's industry. It was estimated the tax was costing state poultry people at least $325,000 a year plus the expense and labor in putting the tags on the wings of chickens.

Department of agriculture officials in Florida said, at a special meeting with Georgia officials, that it would be necessary for the legislature to act upon the measure since it was a legislative matter. Mr. Campbell said when the Florida legislature adjourned without acting, he felt the step toward placing a retaliatory tax on Florida citrus became mandatory.

The request was made in the form of a letter to the governor.

Florida poultrymen at the recent meeting in Tallahassee said the inspection tax and wing-tag was necessary to assure housewives of getting first grade chickens.

Georgia normally imports from Florida some 573,000 boxes of oranges and more than 405,000 boxes of grapefruit, Mr. Campbell said.

Gov. Vandiver, who has been out of town, promised a decision later on whether to issue the executive order levying the tax. He asked his office to conduct legal research to see whether he has the power to put the tax on.

Mr. Campbell said if the governor does put on the tax, he feels certain that an agreement will be reached between the two states.

Already Florida citrus people are talking about getting the wing tags lifted.

Robert W. Rutledge, vice president

(Turn to TAX, page 104)

Plans for Denver Egg 'Factory' Announced

DENVER—The Gates Rubber Co. has announced plans for an "egg factory" with 100,000 hens to produce eggs for the Denver market.

The company said that it had formed a subsidiary, Gates Cyclo, Inc., headed by Lewis A. Hayden of Denver, which will build a $500,000 "electronic egg factory" near Brighton to house 100,000 layers under environment-controlled conditions.

The announcement said that the installation will use a "modern method of keeping hens under controlled conditions which was developed by Mr. Hayden in four years of research." Hens in individual cages in tiers revolve around a tower, reaching food and water supplies at specific intervals in a "merry-go-round" system.

It has been reported that the system results in a significant increase in average production per hen.

'Range Conditions Poorest Since '56'

FARGO, N.D. — Present prospects indicate that the supply of forage for summer grazing in 17 western range states will be below average and the poorest since 1956, according to the North Dakota Crop and Livestock Reporting Service.

The report stated that the June 1 subsoil moisture reserves were short over wide areas of the 17 states and it was stated that unless there are timely and generous rains during the next 30 days the summer growth of pasture and range feed will be well below normal. "In other words, if June is dry in the West, the livestock industry is going to be subject to considerable stress in adjusting numbers to available forage," the report said. "The only areas where June 1 soil moisture supplies indicate an average or better summer grazing season are in the Pacific Northwest and the Central Plains."

June 1 practically all livestock were off supplemental feed except in some of the drier locations of the South, the report continued.

It was stated that the 1961 calf and lamb drop is nearing completion and reports indicate a high survival rate. This year's calving and lambing rate is expected to be relatively high and above average due to mild weather during the critical period of heavy births.

The weighted numerical rating for range feed in the 17 states is 79 compared with 82 for June 1, 1960, and the 10-year average of 81. The May 1 condition was rated as 76. The weighted figures 70-79 indicate fair condition while the figures 80-89 indicate good condition.

The condition of cattle June 1 is rated at 84, the same as a year earlier and the 10-year average. Sheep condition is 83 compared to 84 for a year earlier and the 10-year average.

Harry G. Cowan of Spencer Kellogg Dies

MINNEAPOLIS—Harry G. Cowan, 71, retired district sales manager of Spencer Kellogg & Sons, Inc., in the Minneapolis market, died in the Masonic Hospital here recently.

Harry G. Cowan

Mr. Cowan, who had the distinction of completing 49 years of service when he retired July 1, 1955, joined Spencer Kellogg July 30, 1906, as an office boy in the firm's Buffalo, N.Y., office, and subsequently saw service in the cashier's, controller's and accounting departments.

In October, 1926, he was appointed district sales manager in charge of the Minneapolis office. He worked in this area until his retirement, with exception of a one year period when he was sent to Washington to work with the feed and livestock branch of the Food Production Administration during World War II.

The events that stand out in Mr. Cowan's pre-Minneapolis days are the time he was made "commodore" of a fleet of four canal boats, and the assignment as a young accountant to do a special audit of the books of a Toledo subsidiary of Spencer Kellogg. The canal duty involved getting four flax-loaded barges, which had been damaged, to Buffalo ahead of the close of navigation. He said he didn't have his clothes off for 24 days of supervising the job. Practically all of the flax arrived undamaged.

Mr. Cowan was active in feed industry affairs and served as president of the Northwest Feed Manufacturers Assn. The group named him "president emeritus" upon his retirement in 1955.

Peter Hand Plans European Plant

CHICAGO—Wiley Akins, vice president and general manager of Peter Hand Foundation, Chicago, manufacturer of vitamin fortifiers for the feed industry, was scheduled to arrive in Rome, Italy, June 17 on the start of a flying trip to nine foreign markets. He will meet with feed manufacturers and distributors and will survey possible locations of a European branch plant.

In Rome, Mr. Akins will attend a meeting of Italian feed manufacturers. At this meeting, Peter Hand research vice president, Dr. R. A. Rasmussen, animal division, and Dr. Myron W. Pasvogel, poultry division, will present papers on nutrition developments in their respective fields.

From Rome Mr. Akins will go to meetings with manufacturers and distributors in Cairo, Egypt; Tripoli, Libya; Tel Aviv, Israel; Beirut, Lebanon; Athens, Greece; Belgrade, Yugoslavia; Zurich, Switzerland, and Madrid, Spain.

Mr. Akins, who recently announced that total sales of Foundation products had increased for the seventh consecutive year, gave considerable credit for growth of the firm's export business to favorable shipping rates made available with the opening of the St. Lawrence Seaway. He also cited the firm's "technical services and research facilities as important factors in our success in foreign markets."

Mr. Akins said that increased sales since Peter Hand entered the European market in 1958 have brought consideration of the establishment of a branch plant overseas. This contemplated expansion, along with establishment of additional branch plants in the U.S. and improvements at the firm's 450-acre research farm in Wisconsin, was announced by Mr. Akins in a recent report on progress of the company.

Peter Hand Foundation's main manufacturing facility is in Chicago, and a branch plant in Dallas serves the Southwest. Plans for further domestic expansion will be finalized soon, Mr. Akins said.

Poult, Egg Demand Reported as Strong Despite Size of Crop

MT. MORRIS, ILL.—Even though the record magnitude of the 1961 turkey crop is clear, late demand for eggs and poults has continued strong, the National Turkey Federation said. Egg producers and hatcherymen report that demand is in excess of the available supply.

Poult production continues to mount and NTF says it is difficult to estimate when a downward trend will occur. "Reports show breeder flock owners are hanging onto their hens, squeezing them for every egg that can be laid," an NTF bulletin comments.

"Most egg producing flocks were brought into production early and are 'laid out.' As the result, production and fertility have dropped so low that breeders are moving to market quite rapidly. Many prominent hatching egg producers are finding it necessary to cancel orders they accepted in good faith. This condition does not necessarily indicate much, if any, decrease in the anticipated crop. It simply means the crop would be even larger if sufficient hatching eggs were available."

The most encouraging factor about the turkey industry outlook, according to NTF, is that consumption of turkey appears to be at record levels. Because of the largest crop of breeder turkeys in history and an increasing volume of new crop turkeys, prices have dropped and retailers are featuring turkeys. This promotion, NTF says, is moving turkeys in great numbers.

F. T. Heffelfinger, II — T. B. Schultz — W. R. Renwick — A. D. Beggs

Peavey Forms Producer Services Group

MINNEAPOLIS — Formation of a producer services group within F. H. Peavey & Co. has been announced by Totton P. Heffelfinger, president, following a meeting of the firm's board of directors.

F. B. Wells, III

Included in the new arrangement are the Peavey Feed Mills and Peavey - Occident Elevator divisions of the company.

F. T. Heffelfinger, II, was elected vice president and director of the new operation.

T. B. Schultz will assume the duties as vice president and general manager of Peavey-Occident Elevators July 1, and William R. Renwick was recently appointed vice president and general manager of Peavey Feed Mills.

The new group will be responsible for organization and planning of Peavey's country operations that provide service to producers of grain and animal products, the announcement said.

Both divisions will continue their separate operations.

Prior to this election, F. T. Heffelfinger had been vice president of the parent organization in charge of feed operations.

Mr. Renwick will assume his post July 1. He had formerly been an executive of the management controls division of Peat, Marwick, Mitchell & Co., Chicago.

Mr. Schultz is presently serving as vice president and assistant general manager of Peavey Elevators.

He will assume his new duties upon the retirement July 1 of Truman J. Beggs, vice president and general manager of Occident Elevators division of Peavey; and upon the retirement from active management of L. J. Carlin, vice president and general manager of Peavey Elevators.

Mr. Carlin is taking a leave of absence, and will serve the company in an advisory capacity.

Other Board Action

Other action of the board saw the election of F. B. Wells, III, as vice president of grain marketing; and A. D. Beggs as vice president of merchandise marketing of Peavey-Occident Elevators.

Mr. Wells has been vice president of grain merchandising for Peavey Elevators, while Mr. Beggs formerly was assistant secretary and assistant to the general manager of Occident Elevators.

Lowell Judd Heads Albers K.C. Branch

LOS ANGELES—Lowell Judd has been promoted to vice president of Albers Milling Co., Los Angeles, and general manager of its Kansas City branch, according to G. A. Ensminger, executive vice president.

Lowell Judd

Mr. Judd will be responsible for Albers branded feed sales and all feed manufacturing in the Midwest, with the exception of the eastern specialty division sales department under James L. McGovern.

Mr. Judd has 25 years of experience with Albers in both production and sales. He was production manager at Albers Kansas City branch until 1957, and for the past four years has been sales manager of Albers Washington state feeds division.

Ray Clarno has been promoted to feed sales manager for the state of Washington replacing Mr. Judd. Mr. Clarno joined Albers as a trainee after his graduation from Oregon State College nine years ago, and has progressed through the sales department. He was recently sales supervisor under Mr. Judd.

Dick Moulton has been appointed assistant supervisor at Seattle covering northern Washington. Al Nicoll will continue as assistant supervisor for the southern territory.

Feed Mill Acquisition

PULASKI, TENN.—R. P. Dodson, owner of Richland Mills in Pulaski, has announced the acquisition of Hermitage Feed Mill of Nashville.

There will be no changes in personnel at the Nashville plant, but headquarters of the firm will be operated at Pulaski, said Mr. Dodson.

Auto Crash Fatal to George L. Sparks, 44

ST. LOUIS—George L. Sparks, 44, president of Sparks-Waters-Farnen, Inc., St. Louis grain merchandiser, was killed June 12 when he apparently lost control of his car when distracted by a low flying plane.

State troopers said a witness told them the victim appeared to be looking up at the plane when the car swerved into a concrete abutment of an overpass at the entrance to Lambert Airport. He was pronounced dead at St. Louis County Hospital.

Relatives said he was on his way to the airport to pick up a plane ticket.

Mr. Sparks was second vice president of the Merchants Exchange of St. Louis and vice chairman of the National Grain Trade Council.

He is survived by his wife, Leota; a daughter, Linda, 19; and a son, Bill Lee, 14. Also surviving are his father, Marvin Sparks, Shelbina, Mo.; a brother, Victor Sparks, Madison, Mo.; and a sister, Mrs. Margaret Ratliff, Washington, D.C.

Sale of Properties

CAPE GIRARDEAU, MO. — The defunct Federal Grain Co. has been ordered by U.S. District Judge Ray W. Harper to sell its Missouri properties to a group headed by N. H. Bruckerhoff of St. Marys for $495,000.

The sale to Mr. Bruckerhoff and associates includes Federal Grain elevators at Diehlstadt, Morley, Bell City and Vanduser, Mo.

The Missouri Farmers Assn. of Columbia dropped out of the bidding after the Bruckerhoff group outbid its top offer of $450,000. The properties had been appraised at $555,200, but the successful bid was in excess of the two-thirds required by the court.

Amprolium-Antibiotic Combinations Cleared

RAHWAY, N.J.—The coccidiostat amprolium (Amprol) may now be used in combination with high levels of penicillin and streptomycin (Pro-Strep) and chlortetracycline (Aureomycin) for prevention of certain specific poultry diseases, Merck Chemical Division announced this week. It may also be used with growth-promoting levels of bacitracin.

The Merck announcement followed Food and Drug Administration action clearing these amprolium and antibiotic combinations.

Merck said that its newest coccidiostate is cleared for use with "Pro-Strep" at 100 gm. per ton; chlortetracycline, in a range of 50 to 200 gm. per ton, and bacitracin, between 4 and 50 gm. per ton.

James Halpin, Poultry Scientist, Dies at 78

MADISON, WIS.—James G. Halpin, 78, emeritus professor of poultry husbandry at the University of Wisconsin, died in a hospital here after a long illness.

A national leader in poultry research and teaching, Prof. Halpin organized the university's poultry department in 1909, and was its chairman until 1952. After retiring in 1953, he was a consultant for the Murphy Products Corp., Burlington, Wis., manufacturer of feed.

Prof. Halpin's work at the University of Wisconsin centered on nutrition, and he was a pioneer in applied vitamin research to build better poultry feeds. His first work at Wisconsin was with calcium feeds, and he's said to have shown the value of oyster shell as a calcium source for poultry.

Prof. Halpin also taught at Michigan State University where he advanced the idea that meat scraps and fish meal make good animal feed. Before that time, meat scraps had been thrown away.

A member of the Poultry Science Assn. since it was organized in 1908, Prof. Halpin was a past president of that group. The association gave its annual teaching award to him in 1950. He was general chairman of the 1939 World's Poultry Congress in Cleveland, Ohio, and in 1959 he was elected to the "Poultry Hall of Fame." He was co-author of more than 80 technical papers.

Borden Distributor for Pacific N.W. Named

NEW YORK — Appointment of Capps & Lowe, Inc., Seattle, Wash., the oldest poultry supply house in the Pacific Northwest, as the Borden Special Products Co's distributor of feed supplements in the area has been announced by Richard G. Sanders, sales and marketing director of Borden's feed supplements division.

Capps & Lowe will serve as Borden's feed supplements distributor in the states of Washington and Oregon and the province of British Columbia in Canada. The firm maintains warehouses at Seattle and Lynden, Wash.; Portland, Ore., and Auldergrove, B.C.

"With Capps & Lowe's sales force and warehouse facilities, we can now offer even better service to our customers in the Pacific Northwest," Mr. Sanders said.

DEATH

(Continued from page 1)

dent of the Spartan Grain & Mill Co., and two other sons, Alonzo A. and Francis P., are company officers.

Mr. Fretwell was born in Frederick County, Md.

He is survived by his wife, Julia Alexander; his three sons mentioned above; one sister, Mrs. Clarence Taylor of Baltimore, Md., and five grandchildren.

'EXPANDED' FEED BOOSTS HEIFER GROWTH

MADISON, WIS.—A good deal of interest has been shown recently in the use of "expanded" concentrates in animal feeding, other than their already wide use in pet foods. University of Delaware researchers have been active in this area of research, and they reported some findings at the American Dairy Science Assn. meeting this week.

The Delaware group reported that when dairy heifers were fed expanded concentrates along with long hay, better growth was achieved than when similar animals were fed long hay plus ground concentrates, or when the hay and concentrates were mixed at 2 parts hay to 1 of concentrate, ground and pelleted. In the eight-week trial, the growth rate averaged 91, 79 and 70 lb. total gain for the respective treatments.

This is considered a new development which manufacturers of calf foods and other young animal feeds might watch for further developments.

Summaries of this and other research reports at the Dairy Science meeting will appear in Dr. S. H. Morrison's "Putting Research to Work" department in Feedstuffs, beginning in the June 24 issue.

BROILERS

(Continued from page 1)

ported by the U.S. Department of Agriculture.

In Georgia, the market situation was described as firm with close supply, and significantly it was disclosed that average weights were decreasing.

A price of 12-13¢ is not satisfactory by any means but it does indicate a reversal of the trend that has existed for the past several weeks when prices fell to a new record low of 10.6¢, a disastrous price for producers.

The trend toward a better market was partially attributed to the arrival of real hot weather in the South and the rest of the nation. Processors who watch the consumer market have contended for the past several weeks that cool weather had discouraged "cook-outs," a vast market for broilers this time of the year.

Another reason for feeling more optimistic is the belief, based on reports from Washington, that controls for poultry may be a dead issue, at least for the time being.

A group of independent growers and a sprinkling of feed dealers met in Gainesville June 14 to discuss the price situation. Some 400 persons attended the meeting at which time the matter of controls was discussed. The meeting was attended mostly by small operators who said controls are needed to bring the poultry market back to normal.

The principal speaker was Lewis Foster, a poultryman from Jasper, Ga., who cited cotton as an example of what controls can do for the little fellow. He bemoaned the fact that poultry growing has become a figure of mergers, integration and contract growers.

No definite action was taken at the meeting, although the audience was asked to vote, by standing, if they were in favor of the right to vote on poultry controls. Out of the 400 present, approximately 75 stood up. When the audience was also asked to vote on favoring poultry controls as a part of the farm omnibus bill, only about 35% of the audience rose.

Mr. Foster said his group had discussed the poultry price situation with Congressman Phil M. Landrum (D., Ga.) and that they had also been in touch with Senator Herman Talmadge (D., Ga.).

COWCULATOR—Dr. C. D. Caskey, director of feed research, Cooperative Mills, Inc., has developed an electronic computer—known as the "Cowculator"—which determines the most profitable level of concentrate feeding for dairy cows. Dr. Caskey, shown here with the original model, is now streamlining the computer to brief case size. The first showing of the computer took place June 12 at a meeting of the American Dairy Science Assn. at Madison, Wis.

'COWCULATOR'

(Continued from page 1)

portant economic factor in dairy feeding."

"It has long been recognized," Dr. Caskey said, "that as more nutrients are fed to cows, more milk will be produced. But there is a law of diminishing returns which states that the amount of milk produced by each extra pound of feed gets smaller and smaller until it reaches the point where additional feeding would not make a profit.

"The intensity of feeding which would be most profitable is determined by the milk-grain price ratio," he added.

Determines Feeding Rate

Dr. Caskey's "Cowculator" determines the correct feeding rate, starting with data on milk price and feed cost. From this point, it is a simple matter for the computer to recommend the daily feed allowance for each cow, based on her needs for maintenance, growth, reproduction and milk production and upon the butterfat content of the milk and the amount and quality of forage the cow consumes, the cooperative says.

All the required information is fed into the "Cowculator" and the answers read off dials. Calculations are fast, supplying an answer just about as quickly as the information can be fed in. Normal calculating time is one minute per cow.

The backbone of the computer is a mathematical curve which Dr. Caskey worked out from average responses obtained from several college station herds when cows were fed varying levels of nutrients.

"The figures used are the most accurate available," Dr. Caskey said, "though we realize that this equation is fitted into a particular set of data which might in time be altered."

Data Used

Actually, the computer has a total of six equations built into it. These allow the "Cowculator" to use the following data in computing the most profitable level of concentrate feeding for each cow:

(1) Price of milk at the farm.
(2) Feed cost at the farm.
(3) Nutrient content of the hay and silage.
(4) Nutrient content of the feed.
(5) Nutrients obtained from pasture.
(6) Age of cow and reproductive stage.
(7) Daily milk production and its butterfat content.
(8) Weight of hay and silage fed daily.
(9) Individual cow weight.
(10) Price of forage at the farm.

"It's possible for a farmer to feed extra feed and lose money on it because the milk produced will not pay for the feed required to produce it. This principle has long been known among research workers, nutritionists, etc.," Dr. Caskey reiterated. "We have fitted a curve mathematically to research data showing relationships and have correlated that with a feeding rate which is the most profitable. This allows us to determine the most efficient level of concentrate feeding."

Uses DHIA Coding

Dr. Caskey uses the DHIA's system of coding silage and hay in making his calculations. He gives feed a net value based on the fact that a cow will not consume as much hay when the concentrate feeding rate is increased. For example:

If a dairyman is feeding hay and he steps up the rate of grain feeding, the cow will eat less hay so the dairyman will have a cost different from the quoted price for the feed consumed. If the dairyman is feeding a low-priced hay, the net cost of his grain will be higher if he replaces some of the hay with grain.

Here are the major calculations that may be made with Dr. Caskey's "Cowculator":

(1) The amount of feed to be fed to get the maximum profit.

(2) The pounds of nutrients required for a given quantity of milk of specified fat content when present feeding rate is known percentage of standard.

(3) Conversion of pounds of milk at any fat content to pounds of 4% fat corrected milk.

(4) The pounds of nutrients obtained from forage. This can be separate for hay, silage and pasture or a combination.

Dr. Caskey—who has had electronics as a hobby for many years—designed the "Cowculator" with the aid of his son, David L. Caskey, who is a student at Massachusetts Institute of Technology majoring in electrical engineering. They built the computer in their Linthicum, Md., home.

POULTRY PLANT

(Continued from page 1)

to serve the northern Alabama broiler industry.

"We have great confidence in the broiler industry of northern Alabama as a growing and expanding business and feel that getting the processing plant into operation will further bolster the industry and the Guntersville community," he said.

Pillsbury has feed manufacturing plants at Jasper, Ala., and Gainesville, Ga., serving major broiler growing areas.

S. Jones Dickinson, Executive Vice President, Sherwood Feed Mills, Inc.

Woodrow S. Harrison, Vice President, The Baltimore Feed and Grain Division of Sherwood Feed Mills, Inc.

"Baciferm® costs less than most antibiotic supplements, yet it is second to none"

says **George Seymour**, Director of Research, Sherwood Feed Mills, Inc.

Hundreds of feed manufacturers have found that Baciferm, zinc bacitracin antibiotic supplements, does an outstanding job for their customers. Sherwood Feed Mills, Inc., of Baltimore, Maryland, is one of this growing list of Baciferm Boosters. The Sherwood Feed Mills, Inc. and its branch, the Baltimore Feed and Grain Division of Baltimore, manufacture over 175 different formulas of poultry, swine, beef and dairy feeds in addition to private label wild bird feeds and dog food. Their Director of Research, George Seymour, sums it up this way:

"Baciferm is certainly the buy. Baciferm is used extensively in our poultry and swine feeds. Baciferm costs less than most antibiotic supplements yet is second to none in stimulating growth and reducing mortality."

CSC

Animal Nutrition Department

COMMERCIAL SOLVENTS CORPORATION

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Names in the News

BARTLETT - SNOW - PACIFIC NAMES CHIEF ENGINEER—Otis J. Adams has been named chief engineer of the Bartlett-Snow division of Bartlett-Snow-Pacific, Cleveland, Ohio, newly formed by the purchase of The C. O. Bartlett & Snow Co. by Pacific Foundry & Metallurgy Co., according to an announcement by Dan S. Mortensen, executive vice president and general manager.

Mr. Adams joined The C. O. Bartlett & Snow Co., one of the predecessor companies of Bartlett-Snow-Pacific, in 1956 as assistant chief engineer.

MIDWEST BAG NAMES THREE—The Midwest Bag Co. of Des Moines has named three salesmen to represent it in six midwestern states, according to Dan Masters, company sales manager.

M. M. Rosenblatt will cover eastern Iowa and western Illinois; Marvin Bookey will represent the firm in western Iowa, eastern Nebraska and southern South Dakota; and Don Chase, formerly with Bemis Bro. Bag Co., St. Louis, will work in Minnesota and Wisconsin.

DAWE'S LABORATORIES NAMES ORDER SERVICE MANAGER—Paul Ostby has been named manager of the order service department at Dawe's Laboratories, Inc., Chicago. The announcement was made by D. B. Kinkaid, vice president, marketing.

In his new position, Mr. Ostby will be responsible for pricing, order writing, billing and customer service relating to orders. The order service department at Dawe's Laboratories is a new department combining functions relating to orders formerly handled by several other departments.

A nutritionist in Dawe's technical service department since 1956, Mr. Ostby holds two degrees from the University of Illinois, B.S. in animal science and M.S. in animal nutrition.

IDAH-BEST SALES SUPERVISOR—James J. (Jim) Nixon has been appointed branch sales supervisor for the eastern Idaho territory served by Idah-Best Feed Mill in Idaho Falls.

Mr. Nixon has spent the last five years as division territory manager for a national feed company in Twin Falls and Idaho Falls areas.

His responsibilities with Idah-Best Feed Mill include advising feed dealers on organization and business management, training of sales and plant personnel, and planning and supervising all phases of sales and promotion programs.

AMERICAN DAIRY SCIENCE ASSN. ELECTS OFFICERS—New officers of the American Dairy Science Assn. took office at the close of the group's annual meeting in Madison, Wis.

E. L. Jack of the University of California, who has been association vice president since June, 1960, automatically became president.

The new vice president is I. Walker Rupel, head of the department of dairy science, Texas A&M College.

E. L. Jack I. Walker Rupel

Dr. Rupel has served the association in many capacities during his several years of membership.

New members of the executive board are Prof. Raymond Albrectsen and Prof. C. W. Nibler. Prof. Albrectsen is project leader, animal husbandry extension, Cornell University, and Prof. Nibler is extension dairyman at the University of Nebraska.

INTERNATIONAL MINERALS & CHEMICAL APPOINTS AGENT—Bradley Barr & Co. of Kansas City has been appointed sales agent for the feed ingredient department of International Minerals & Chemical Corp., Skokie, Ill.

Bradley Barr

The newly formed firm will handle the sales of IMC's dicalcium phosphate, defluorinated phosphate, MC-7, and bentonite in Missouri, Arkansas, Kansas and Oklahoma.

Bradley Barr, founder of the new firm, has been associated with feed and allied industries since 1933. He received his degree in chemistry from Yale University.

UNION STARCH & REFINING APPOINTMENTS—Recent changes in the general administrative department of Union Starch & Refining Co., Inc., Columbus, Ind., have been announced by T. R. Reed, president.

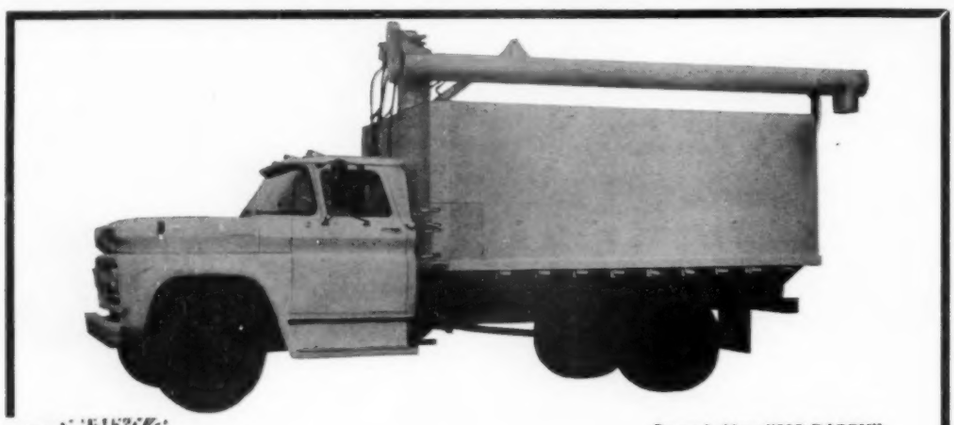
W. L. Goeller, sales manager of feeds and oils for the past several years, has been named director of sales administration.

Carl Allison, former manager of the Edinburg, Ind., plant of Union Starch, has been named feeds and oils sales manager.

CENTRAL SOYA PROMOTES CHARLES T. DIETRICH, JR.—The promotion of Charles T. Dietrich, Jr., to special assignment on its Ft. Wayne, Ind., feed sales staff, has been announced by Central Soya's McMillen feed division at Ft. Wayne.

Prior to his promotion, Mr. Diet-

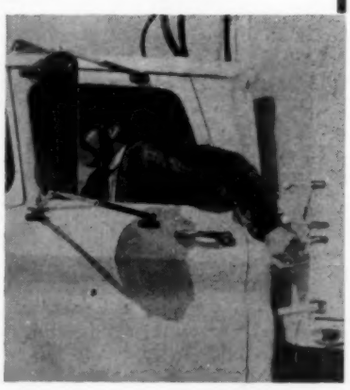
(Turn to page 14)



Pamco's New "BIG DADDY"

NEW only PAMCO unloads AND loads from the rear AND front!

PAMCO's Big Daddy . . . another PAMCO first . . . feeds more new profits to your bulk customers with the new PAMCO PROVEN front unloading and loading service. The Big Daddy combines PAMCO's proven auger system with the precision performance of a dual hydraulic system to deliver all types of feed including molasses feeds. Choose the PAMCO bulk delivery truck that best fits your needs . . . PAMCO Back Saver—or—Skoop Skipper with rear unloading AND loading—or—PAMCO Big Daddy with front unloading AND loading.



PAMCO BIG DADDY. Proven close tolerance of tubes and 9" floor auger, 12" upright auger and 9" boom auger. Exclusive front unloading AND loading. Smooth dual hydraulic system. Pellets handled with minimum breakage. Molasses feeds delivered with customer satisfaction.

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PGB-250
DRY VITAMIN A
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DISTRIBUTORS and SERVICE for
PGB 250
(250,000 units per gram)—DPI
The leading Vitamin A. Stabilized Vitamin A Palmitate in Gelatin. Also available in assorted potencies blended with soybean feed.
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DPi

MADE IN ROCHESTER, N.Y., U.S.A. BY

DISTILLATION PRODUCTS INDUSTRIES • DIVISION OF EASTMAN KODAK COMPANY

CONTAINS vitamin A palmitate, edible tallow, gelatin and glucose. Butylated hydroxyanisole and butylated hydroxytoluene added as preservatives.
250,000 U.S.P. UNITS OF VITAMIN A PER GRAM

Net Wt._____ Tare Wt._____ Control No._____ Order No._____

FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

This is what it all means

PGB-250 This is the trademark of DPi's dry vitamin A for fortifying feeds, pre-mixes, concentrates, and other products fed to poultry and livestock. The material consists of golden orange spherical particles in a size range between 30 and 120 mesh.

DPi has been a primary producer of vitamin A for a long time, was first to synthesize it commercially in this country, produces vitamin A in a modern plant using methods and processes developed in DPi laboratories.

Palmitate This is an inherently more stable form of vitamin A. It resists the effects of heat, moisture, and long storage. Testing vitamin A palmitate and the other commercial ester, vitamin A acetate, in stored feeds and premixes, we typically find 25% or better stability for the palmitate than for the acetate.

Gelatin is the most effective substance we have found for protecting vitamin A against air and minerals. Its digestibility makes the vitamin quickly available to the bird or animal.

250,000 The vitamin A potency of PGB-250 is 250,000 units per gram. You can also get potencies of 30,000, 20,000, or 10,000 units per gram. The diluent used in these dilutions is solvent-extracted soybean feed of particle size range especially chosen to blend with PGB-250.

You can get **PGB-250** *Dry Vitamin A* in 25-pound and 100-pound drums directly from us or from distributors throughout the country. For further information or a quotation, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto.

Histostat®-50 n

for faster, surer control

Dr. Salsbury's Histostat-50 is now available in handy batch-size packages. Each Ton-Pak contains 1 pound—the right amount of Histostat-50 to medicate one ton of complete turkey ration. (Use one Ton-Pak per 2,650 lb. of all-mash ration for chickens.) Supplies of the new Histostat-50 Ton-Pak are available from your Dr. Salsbury's distributor or direct from the Dr. Salsbury's branch through which you are serviced. Histostat-50 Ton-Paks are available in cartons containing forty-eight 1-lb. Ton-Paks. Once you've tried the new Ton-Paks, you are likely to keep on using them, because of their many advantages.

ow in Ton-Pak
of batch-mixed feeds

● Do away with errors in weighing drugs ● Eliminate need for further premixing ● Accelerate mixing operations ● Allow wider drug choice at the mixing level ● Provide more positive inventory control, both of drug stocks and tons of medicated feed ● Eliminate the hazard posed by opened, partially-used drug containers ● Minimize possibility of contaminating other feeds ● Reduce total inventory of premixes and concentrates needed to provide different drug components

Histostat-50, the No. 1 blackhead preventive

Every year, for ten years now, more and more turkeys have been raised on feed containing Dr. Salsbury's Histostat-50. And this year, many more millions will be protected by this No. 1 blackhead preventive. Why? Because growers have found that Histostat-50 consistently protects their flocks against mortality and weight loss from blackhead. In addition, test after test at experiment stations have given similar results: *Histostat-50 prevents blackhead best*. So encourage growers to take no chances with turkey profits. Mix Histostat-50 in all rations for range birds and advise that it be fed continuously. Use it for chickens, too, when blackhead is a problem. Remember—strong, healthy birds reflect credit on your feed.

UNISTAT® AND 3-NITRO® POWDER ALSO AVAILABLE IN HANDY NEW TON-PAKS

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U.S.A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

M-en-O Brand

MANGANOUS OXIDE

FEED GRADE

ACTIVE INGREDIENT—"AVAILABLE" MnO—MINIMUM 84.0%

★ Free flowing, dry, green-gray, non-caking powder—90% minus 200 mesh.

★ Marketed in 100 lb. net multi-ply paper bags. Properly labelled as to quality, contents, weight, etc.

This product is widely used as a prime source of manganese for manufacturers and blenders of trace mineral feed supplements. It contains the highest percentage of "available" manganese (as MnO) of any product in this important market.

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FEEDSTUFFS
LEADER IN THE FIELD

Charles T. Dietrich, Jr. Glenn L. Stitzell Richard E. Burket Harry Crosthwaite

rich was a district salesman in the company's eastern sales division.

He joined the company in July, 1950, and has since held a number of sales positions.

VINELAND POULTRY LABS NAMES REPRESENTATIVE — Glenn L. Stitzell, a well-known figure in Iowa livestock circles, has been named sales and service representative for Vineland Poultry Laboratories, Vineland, N.J., according to Dr. Tevis M. Goldhaft, Vineland sales coordinator.

Mr. Stitzell, who will serve the firm in Iowa, is a pharmacy graduate. He has more than a quarter of a century of practical experience in the field of livestock health.

CENTRAL SOYA OPENS FIRST OVERSEAS OFFICE—The opening in Rotterdam, Holland, of Central Soya's first overseas office, and the naming of Richard E. Burket as its European representative, have been announced by D. W. McMillen, Jr., president of Central Soya, Ft. Wayne, Ind.

Mr. McMillen said, "Our company's steadily expanding trade with other countries throughout the world makes it advisable that we establish our first overseas office at this time."

Mr. Burket has been with Central Soya since January, 1955, and has had experience in the formula feed, grain, and soybean meal and oil departments.

In Europe, Mr. Burket will work with all of Central Soya's divisions: processing, grain, chemurgy and McMillen feed.

JAMES FARRELL & CO. NAMES HARRY CROSTHWAITE—James Farrell & Co., a national feed ingredients supplier with headquarters in Seattle, Wash., has announced that Harry Crosthwaite is now a member of its Seattle office sales staff.

Mr. Crosthwaite, graduate of Oregon State University with a degree in poultry husbandry, was formerly a Nopco Chemical Co. western area sales representative.

James Farrell & Co. is a distributor of West Coast fish meal and solubles, and represents International Minerals & Chemical Corp., W. R. Grace & Co. and Miles Chemical Co.

MOORMAN PROMOTES D. A. DULANEY—Announcement has been made by the Moorman Mfg. Co., Quincy, Ill., that D. A. Dulaney has been promoted to the position of manager of its accounting department.

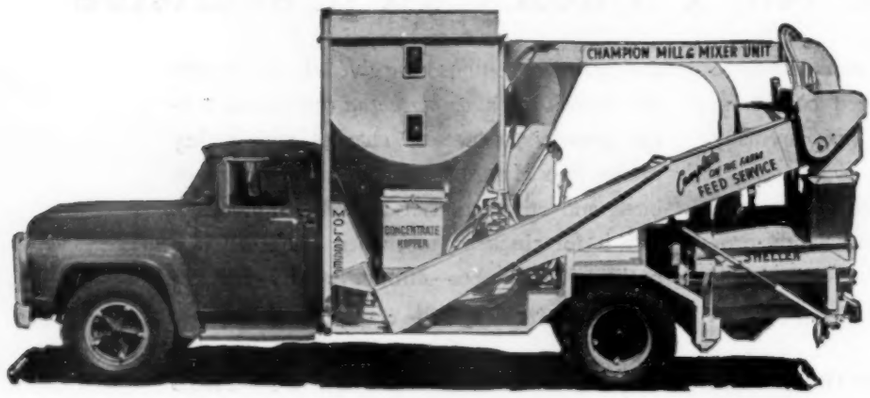
Mr. Dulaney, who joined Moorman in 1932, has spent most of his career in accounting. He was made assistant manager of the firm's accounting department Jan. 31, 1940. He has served as secretary of the company since Aug. 17, 1960, and was elected to the Moorman board of directors Sept. 19, 1960.

The position of manager of the accounting department was under the direction of H. E. Hoener, who passed away recently after having been associated with Moorman for the past 40 years.

NAME CHANGE FOR INGREDIENT FIRM—R. K. (Bob) Alexander, southeastern feed broker, has announced that the Florida secretary of state has approved a request to change the name of his firm to Alex-

CHAMPION

MOBILE MILL EQUIPMENT



PROVEN PROFITS AND PERFORMANCE

This newly-designed One-Diesel-Engine unit reduces power costs to fifteen cents or less per ton—INCLUDING FUEL USED ON THE ROAD.

Your opportunity for real profits in 1961 is CHAMPION—the most economical of all mobiles.

Ask for details of Champion's time payment plan

OPTIONAL EQUIPMENT AVAILABLE

SHELLER with high discharge for loading cobs directly into truck or trailer.

AIR UNLOADING plus standard auger.

TEN-FOOT EXTENSION for discharge auger.

ROLLER MILL

BULK CONCENTRATE CARRIER with six 600-lb. compartments.

VOLUME MEASURING UNIT measures by bushel, all grain being ground.

Get the full story on this new Champion Unit TODAY

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MR. FEED MANUFACTURER:
For *ACTION* and *RESULTS*
INVESTIGATE THE
Ultra-Life PROGRAM
EAST ST. LOUIS, ILL.

PREMIX USERS! HOW KEEN IS YOUR BUYING EYE?

200 FT. or 61 m

HETROGEN® K

100 FT. or 30.5 m

256*

70 FT. or 21.34 m

FOR MAXIMUM

50 FT. or 15.24 m

STABILITY IN MULTI-

40 FT. or 12.19 m

VITAMIN PREMIXES. PROVEN

30 FT. or 9.14 m

HIGH POTENCY RETENTION EVEN

20 FT. or 6.10 m

UNDER THE MOST ADVERSE STORAGE AND MANUFACTURING

15 FT. or 4.57 m

CONDITIONS. DATA PROVING THE SUPERIOR STABILITY OF "256" AVAILABLE

10 FT. or 3.05 m

ON REQUEST FOR YOU OR YOUR PREMIX SUPPLIER. FOR BETTER VITAMIN PREMIXES SPECIFY

5 FT. or 1.52 m

HETROGEN K "256", AND BE SURE THE POTENCY IN THE BAG MATCHES THE POTENCY ON THE TAG.

HETEROCHEMICAL CORPORATION

111 East Hawthorne Avenue
Valley Stream, Long Island, N.Y.

*Patents Pending

Please send me information on new K "256" for premixes ☐
Please send me information on your regular vitamin K supplements ☐

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ander & Co., Inc., with headquarters in the Wallaces Building, Tampa, Fla. The firm previously operated as Alexander-Smith & Co., Inc., at a different address.

Alexander & Co., Inc., is a broker for grain and feed ingredients. Companies represented by the firm include American Colloid Co.; Archer-Daniels-Midland Co.; Bowman Feed Products Co.; Central Soya; Fruen Milling Co.; W. R. Grace & Co.; Graham & Ragle Grain Co.; H. P. Hood & Sons, Inc.; Imbs Milling Co.; International Salt Co.; Lauhoff Soya Co.; LaCrosse Milling Co.; Mowat, Wilson & Co.; Nassau Fertilizer & Oil Co.; New Orleans Grain & Feed Co.; National Oats Co.; Penick & Ford, Ltd.; The W. J. Small Co.; Smith-Douglass Co., Inc.; Southern Soya Corp.; Union Sales Corp.; and Western Condensing Co.

Mr. Alexander is president of the new firm.

SECO, INC., APPOINTS WILLIAM H. KERN—William H. Kern of Cincinnati, Ohio, has been appointed a sales representative for Seco, Inc., Goodlettsville, Tenn. Mr. Kern will handle both Seco mobile feed mills and stationary equipment in the western Ohio division.

Prior to joining Seco, Mr. Kern was a district manager for an investment company.

FULLER CO. NAMES ENGINEERING DIRECTOR—Fuller Co., Catasauqua, Pa., has announced the appointment of Harry A. Markle, Jr., to the position of director of engineering.

The assignment includes the direction of all Fuller Co. divisions, subsidiaries and affiliates.

Mr. Markle was appointed assistant chief engineer for the company in 1945, and was made chief engineer in 1952.

DR. L. E. SHAWHAN JOINS HOLTZAPPLES, INC.—Dr. L. E. Shawhan, a licensed veterinarian who specialized in poultry pathology, has joined Holtzapples, Inc., Elida, Ohio.

Prior to joining Holtzapples, Dr. Shawhan spent three years at the Ohio State Diagnostic Laboratory at Reynoldsburg. His services will now be available to poultrymen in Ohio and eastern Michigan.

A laboratory for the diagnosis and treatment of poultry diseases has been added to the firm's facilities at Elida.

SAWYER ADVERTISING NAMES OFFICE MANAGER—Mrs. Eleanor Crawford has been named office manager of Sawyer Advertising, Gainesville, Ga., according to an announcement by Gordon Sawyer.

The Gainesville agency, which was established last year, specializes in advertising services for the poultry industry.

Mrs. Crawford, for the past several years, has been associated with Georgia Broilers, Inc., and prior to that was with the Gainesville Daily Times.

'Golden Eggs' to Note 2nd Year at APHF

ASHLAND, OHIO — "The Golden Goodness of Eggs" campaign will return to the event where it began two years ago, when Hess & Clark hands out 5,000 hard-cooked eggs during the American Poultry & Hatchery Federation convention at Minneapolis July 18-20. Also cooperating in the promotion are the Colonial Poultry Farms, Pleasant Hill, Mo., and the Morton Salt Co.

During the past two years, Hess & Clark, maker of nitrofurans and other feed medications, has backed a promotional program to acquaint consumers with the nutritional value of eggs. "The Golden Goodness of Eggs" campaign has been designed to supplement the promotional activities of the Poultry & Egg National Board and other national, regional and state organizations. Since 1959, more than 450,000 hard-cooked eggs, in glassine bags with salt and pepper dispensers and informational literature have been handed out to the public.

It was at the APHF convention in 1960 that Hess & Clark received an award for "its unselfish effort and ingenuity in promoting consumer acceptance of eggs through the Golden Goodness of Eggs program."

During this year's event at Minneapolis, University of Minnesota coeds will give eggs to the public and to the performers in the famed Aquatennial torchlight parade. Also on the schedule are gift basket presentations to Jim Arness of CBS-TV's "Gunsmoke" and Jack Bailey of ABC-TV's "Queen for a Day."

New Pfizer Booklet Traces Firm's History

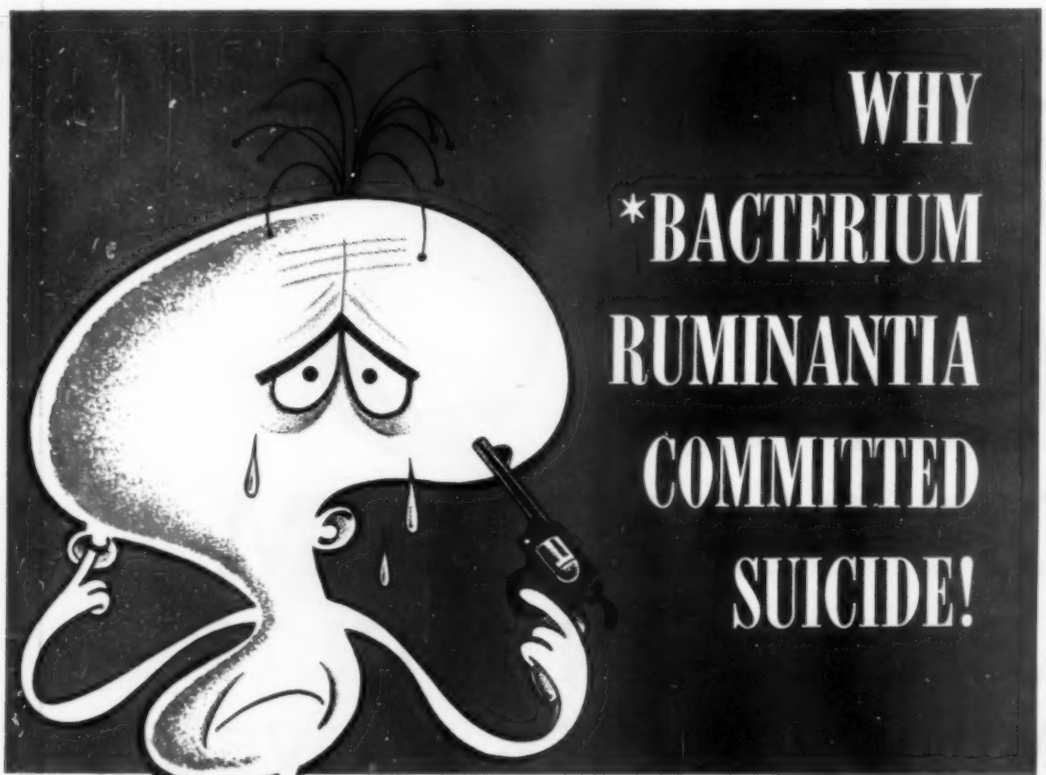
NEW YORK—A century and a decade of growth and scientific progress by Chas. Pfizer & Co., Inc., world-wide manufacturer of chemicals, pharmaceuticals and agricultural products is reviewed in a new publication entitled, "Then—1849 and Now—1961."

Recently issued by the firm, the booklet traces the development of a company founded in a small brick building in Brooklyn in 1849, through the years, with a discussion of present-day scientific developments in antibiotics and other important drugs and chemicals. A section is devoted to "The Look of Tomorrow," dealing with the future course of research in seeking to wipe out infectious diseases in man and animal, the firm states.

Feed Law Changes

CHARLOTTESVILLE, VA. — The Virginia State Feed Assn. has appointed two members to confer with feed inspection officials of the Virginia Department of Agriculture on proposed changes in regulations in the state commercial feed laws.

Robert Gilliam, South Boston, and Donald Danforth, Jr., Richmond, members of the association's regulatory committee, were named to handle the negotiations.



THE CASE OF THE FLUBBED FEED or
"I can't go on without John Deere Feed Urea!"

THIS case was a cinch! Bacterium Ruminantia, (or "B.R.," as we call him), was one of the billions of **Rumen Bacteria* in a cow. He needed plenty of quickly-available *nitrogen* to do his job of breaking down roughage.

BUT . . . old "B.R." had a feed tossed at him with *NO John Deere Feed Urea* in it! . . . low protein, slow availability, little nitrogen! Frankly, the boy was starving to death (so was the cow!). "B.R." took the *fast* way out!

SOLUTION: *Stop* "B.R." Suicide! Have all your ruminant supplements include John Deere Feed Urea's Power-House of concentrated, fast-converting nitrogen and quickly-available protein equivalent!

REWARD!: Lower feed costs! Economical gains! Premium mixing quality! Hardy condition for wintering cattle! More profits! Fast, dependable service.

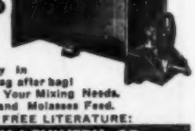
Quality You Know . . . A Name You Trust!

JOHN DEERE

JOHN DEERE CHEMICAL CO.

PRYOR, OKLAHOMA • PHONE VAlley 5-2000

Marion MIXERS
ELIMINATE GUESSWORK IN MOLASSES MIXING!



Complete accuracy in Molasses mixing bag after bag! One mixer For All Your Mixing Needs. Mixes Both Dry and Molasses Feed.
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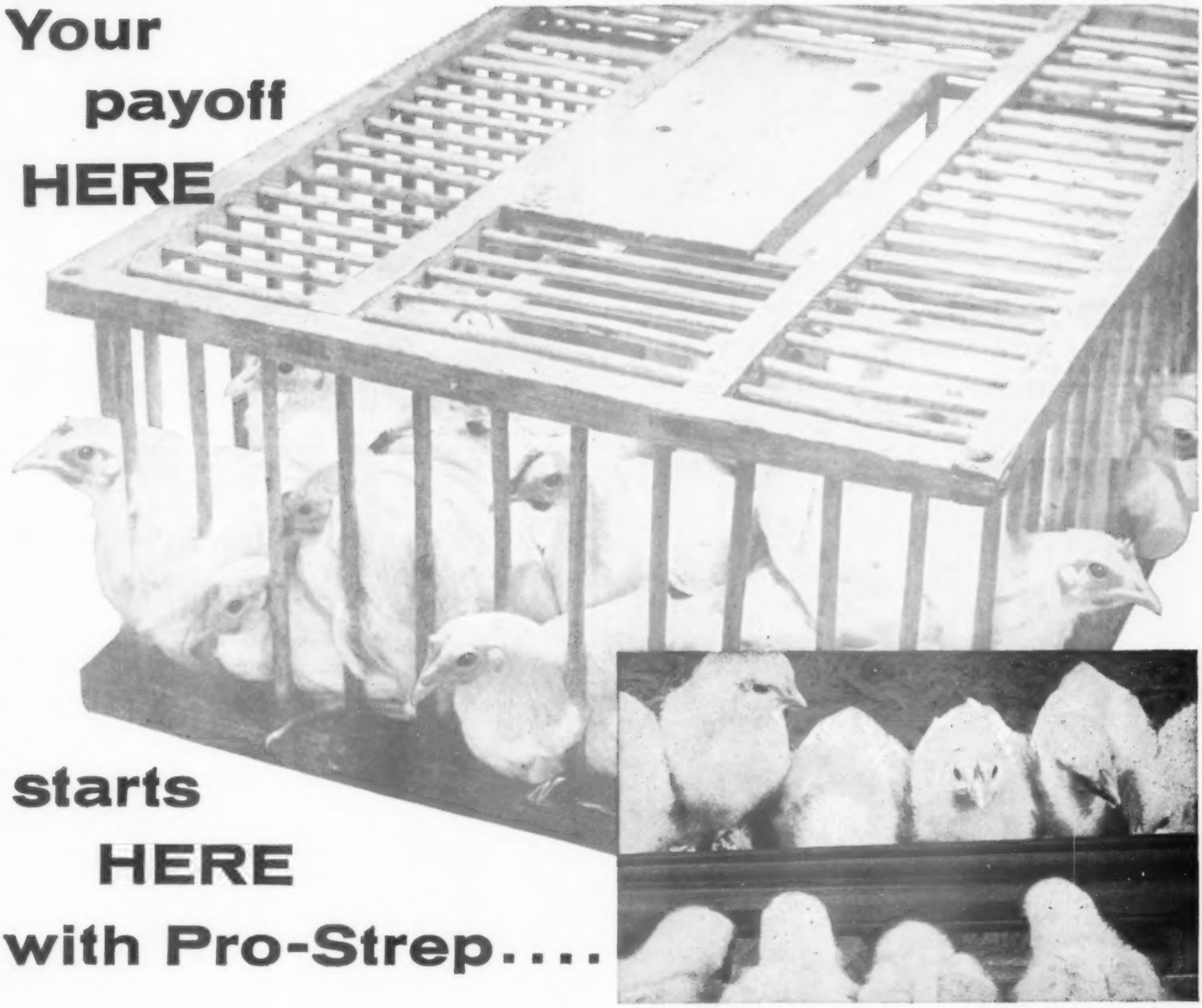
887 11th Street Marion, Iowa

Use Feedstuffs WANT ADS for RESULTS

Your payoff HERE



starts HERE with Pro-Strep....

To help broilers put on those *extra* weight gains that pay off at market time, give your prestarter and starter rations the *extra* protection of PRO-STREP.

PRO-STREP is a highly effective combination of penicillin and streptomycin that does more than sharpen appetites, stimulate growth and improve feed efficiency. It also helps prevent early mortality due to organisms sensitive to penicillin and streptomycin and maintains feed intake and weight gains even in the presence of C.R.D., nonspecific infectious enteritis and stress conditions. Best of all, PRO-STREP does it *more economically than any single antibiotic—narrow- or broad-spectrum!*

That's why more and more progressive feed mills throughout the country are switching to PRO-STREP. What *they* want is what *you* want—an effective combination of antibiotics that can promote growth and protect health at lower cost.

Ask your Merck Feed Products Representative about getting started on a year-'round program of PRO-STREP in your starter and grower rations. You'll find it pays off at market time!

Merck Chemical Division, Merck & Co., Inc., Rahway, N.J.

The Best Antibiotic Combination...

PRO-STREP® MERCK

Penicillin and Streptomycin

®TRADEMARK OF MERCK & CO., INC., FOR AN ANTIBIOTIC FEED SUPPLEMENT

make a B-line for the 3-B's

call *Babe, Bob* or *Bus Stuart*

Specialists for 39 years in: Bob Bus Babe

★ MILLFEEDS ★ SOYMEAL ★ LINSEED MEAL ★ SCREENINGS ★ ALFALFA MEAL

RELIANCE FEED COMPANY PHONE FE. 2-2418

334 MIDLAND BANK BLDG. MINNEAPOLIS, MINN.

Are your hammermill cyclones robbing YOUR plant of valuable product?

Ineffective control of the product discharge from hammermill cyclones can rob you of thousands of dollars a year of extra profits. You can stop this product loss and the savings in product (based on a cyclone efficiency of 98%) will pay for a DAY dust filter in *less* than one year. If you now have several hammermill cyclones operating, you can combine them into one filter installation and your filter will pay for itself in much less than a year. For new plants, cyclones can be eliminated completely, which also results in a "payoff period" much shorter than one year.

This double element DAY "RJ" dust filter is used as a secondary collector to capture "fines" being discharged from a cyclonic separator.

PRODUCT SAVING is just one of many important benefits you enjoy with DAY dust filters. You'll also have cleaner plants and roofs which means lower housekeeping costs. More effective dust control also means better community relations.

WRITE toDAY for complete facts about DAY dust filters and how they can save you money and pay for themselves. For detailed information on DAY "RJ" dust filters request BULLETIN G-30 . . . it's free.

The **DAY** *Company*

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619 Third Avenue N.E.
Minneapolis 13, Minnesota
FEderal 6-9671

MADE and SOLD in CANADA by
The DAY Company of Canada Limited
Rexdale (Toronto), Ontario, Canada
Fort William, Ontario, Canada
Rexdale, Cherry 1-8589

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EXPERIENCE ENGINEERED . . . LABORATORY TESTED . . . PLANT PROVEN

Dust Control • Pneumatic Conveying • Bulk Storage

EQUIPMENT . . . SYSTEMS . . . INSTALLATION

BLENDED AIR—Overhead air ducts force blended air into the farrowing room at Southern Breeders, Inc., Jonesboro, Ga. Note outlets in ducts over each pen. The blended air system is designed to cut down on humidity and cools the room. Walls are lined with aluminum.

Air Blending Controls Humidity In Georgia Farrowing House

By Robert H. Brown
Special Correspondent

Humidity control in the farrowing room, a problem in the deep South where moisture is an ever-present condition, is under development in Georgia, utilizing methods of blended air. These developments are taking place at the Southern Breeders, Inc., Jonesboro, Ga., reputedly the world's largest breeder of meat type hogs.

Some of the features used in blending air in broiler and layer houses are being utilized for the farrowing room. By providing a steady, even temperature in a windowless building, the company hopes to eliminate the biggest part of the humidity problem and to produce at less cost a more uniform breeding pig, according to Ralph Hinton, manager.

By maintaining a temperature of 55° in the building the year around, Mr. Hinton figures the humidity problem will be greatly solved.

First tests of results obtained from the newly-installed system (Pockman) of air control are now being analyzed, and Mr. Hinton is of the opinion these tests will show less mortality and improved growing factors.

"We're seeking first to combat the problem all farrowing houses have and that is the removal of as much moisture as possible. It is this moisture that encourages bacteria breeding," he said.

The newly-remodeled farrowing room has gone through the major portion of the past winter. It was completed in January and now comes hot and more humid weather for another test.

The equipment keeps air circulating by means of a fan and metal ducts running along the ceiling of the room constantly push into the building cooler air from the outside and force the stale, moisture-laden air already in the building out the vent openings in the building's side.

Moisture Removal

"Our first aim in installing air control is to remove as much of the moisture as possible. The second aim has been to control the room temperature," Mr. Hinton said.

Southern Breeders, Inc., is a company whose main business is aiding the establishment of foundation herds. Many of the pigs go to such organizations as 4-H and FFA. In addi-

LIQUID MANURE—Washings from the parlor are pumped into this type of liquid manure spreader and carried to adjoining fields.

SOW HOUSING—The above view is of the section that has not yet been ventilated. Two sections, each housing 24 sows, are located on the farm. In the ventilated area, air ducts are hung from the ceiling and windows are closed.

TEMPERATURE CONTROL—Ralph Hinton, manager of Southern Breeders, Jonesboro, Ga., demonstrates the effectiveness of an infra-red light over farrowing pens. Since getting temperature control, the cost of operating the infra-red lights has been reduced by 25%, Mr. Hinton says.

tion some commercial grades are produced. All in all, the farm produces 5,000 to 6,000 pigs a year.

There are two large farrowing houses and one of these was converted to the new blended air ventilating system. The ducts hung along the ceiling are based on engineered plans. A series of openings are provided above the farrowing pens which provide comfort to the sows, both summer and winter. At the same time, the regulated flow of air protects young pigs from draft exposure.

Taking into consideration the heat gain of animals (and auxiliary heat in winter), the system picks up air from the outside and mixes it with the interior heat. A thermostat regulates the amount of air needed from the outside.

The building, like a lot of the newer broiler houses in the South, is using the newly developed aluminum siding. This siding consists of thin sheets of aluminum on each side of pressed paper board. This siding lines the interior wall. It is designed to hold heat in the winter and keep out the hot, humid weather in the summer.

Odors Removed

"One other thing we have accomplished is the removal of odors. The ventilating system pulls these odors up and out of the building in just a few minutes," Mr. Hinton said.

In order to minimize the amount of interior space to be controlled, seven foot ceilings were put into the building, by arranging the aluminum siding across the top. Over this ceiling there is a 3 in. layer of insulation. A metal roof covers the building.

In between the walls, no insulation material has been used. The aluminum siding does the job.

The two farrowing rooms will house 48 sows. The ventilated section will hold 24 sows, as will the non-ventilated section.

Each of the rooms has been laid out to provide constant drainage on the concrete floors. Troughs run down the center of the floor and the seepage flows into a pit on the outside of the building. After being diluted, it is pumped into a liquid manure spreader and carried to the fields for fertilization.

The spreaders are being made as another part of the firm's activities. The firm distributes them throughout the country. Each unit has a 500 gal. tank and can be filled in about five minutes. The units shut off automatically when full. The coverage can be regulated from the tractor and the spreader has a range of up to 20 ft. in width.

Mr. Hinton reports this type of manure has a NPK manure value of $1 per market hog fed out.

The farrowing house is 30 by 80 ft., which Mr. Hinton figures is about right for good control of ventilation and adaptability.

Each of the farrowing pens is kept

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Shellmaker is slowly soluble in the gizzard to supply most effectively all the extra calcium the hen needs for building strong egg shells. It is also hard enough to do a good grit job as shown in feeding trials at several state experiment stations.

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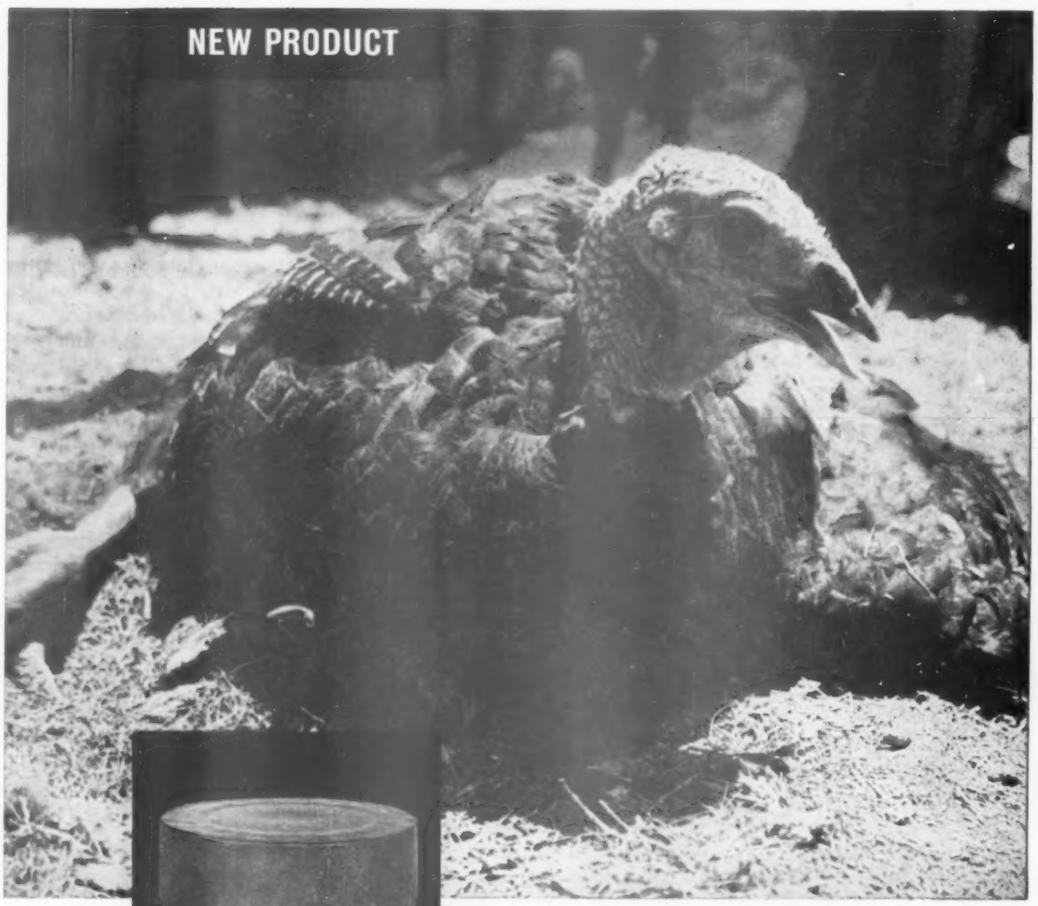

Typical symptoms of "staph" synovitis: turkey resting on hocks, wings spread, and unable to get up.

Albamix*

THE UPJOHN COMPANY
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(novobiocin) for treatment and prevention of "staph" synovitis in turkeys

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Dept. 953
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BASEBALL, CHICKEN TALK—Baseball and picnic chicken were the topics of discussion when Jim Davis, Delmarva Poultry Industry president, and his wife, met Ralph Houk, "sports father-of-the-year," who is the New York Yankee manager. Scene was the annual Father's Day luncheon at the Waldorf-Astoria Hotel in New York when fathers-of-the-year in several different categories were announced by the Father's Day Council. Chicken was named by the council as the official dish again this year for Father's Day, Sunday, June 18. Present also at the luncheon from the Delmarva Peninsula was Mrs. Frank Tharp of Lewes, Del., whose recipe "Picnic Chicken Delight" was named as 1961's official Father's Day recipe.

as dry as humanly possible during the farrowing period and, after the cycle is over, the pens are washed down with steam or a mixture of potash or ammonia compound.

Manure Catcher

Each pen is equipped with a manure catcher which operates off a hinge in the farrowing pen. As the sow raises to relieve herself, she activates a catcher with rollers on it. This roller uses rubber matted rollers to prevent injury. The catcher moves with the sow. An aluminum pan catches the droppings. A drainage plug, made of aluminum and plastic, prevents corrosion. Since the pan is semi-circular in shape it is easily dumped for cleaning.

Mr. Hinton says it is possible to train 98% of the sows to use this pan. Ninety per cent of the animals use it most of the time.

"It certainly cuts down on the clean-up time," he says.

Here's What Feed Man Did to Save $700 Month On Truck Maintenance

MILWAUKEE—From B. C. Swanson, the New Sharon, Iowa, feed man whose management know-how is highly regarded and who addressed the Central Retail Feed Assn. convention in Milwaukee last week, comes this tip on how he's saving $700 a month.

A while back he had on his payroll a full-time truck maintenance man. Because Mr. Swanson has learned to control costs with the help of monthly financial statements, his records told him that he was spending too much on truck maintenance.

He cut these costs by letting the mechanic go and by setting up another mechanic in a garage business in the repair shop of Swanson Elevator Co. Now, Mr. Swanson still gets prompt repair service on his trucks, but the costs of paying a mechanic are shared by others who have their trucks and cars repaired in the new garage.

"Trucks can kill you" in the feed business if costs aren't watched closely, Mr. Swanson remarked.

Mr. Swanson attaches much importance to adequate bookkeeping and frequent reference to financial statements (Feedstuffs, June 10, page 1). He doesn't just assume that a constant check on sales, profit and expenses has many advantages. He knows this to be true.

Some years back his firm, Swanson Elevator Co., experienced a big expansion in business during a feeding season. Demand for his feeds and services became so great that Mr. Swanson hired more men, provided new services, operated more equipment. But at the end of the year—a year during the period before Mr. Swanson adopted his present bookkeeping system—he learned that his expenses grew by a greater percentage than his sales and he ended up with less profit than in years before the boom period.

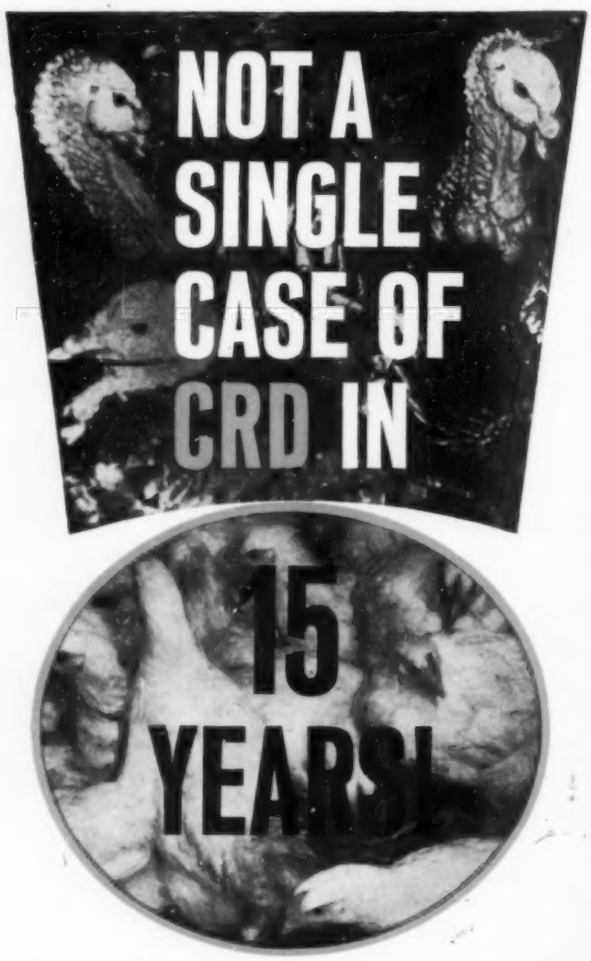
He says this can't happen now because he analyzes his operation thoroughly each month and he knows, almost constantly, what expenses in each department may be wandering out of line.

New Consulting Group Formed in Kansas City

KANSAS CITY — Dr. Vladimir Dvorkovitz, former research director of the Diversey Corp. of Chicago, and lately president and general manager of Jensen Salsbery Labs, the ethical veterinary subsidiary of the Richardson Merrell Corp. of New York, has announced the formation of a new consulting group, "Dr. Dvorkovitz & Associates of Kansas City."

Holder of over 50 U.S. and foreign patents, Dr. Dvorkovitz for the last five years spent considerable time in Europe, Japan and Russia visiting animal health and dairy research facilities and negotiating for U.S. rights to new processes and new specialty products.

The new consulting group will specialize in research and development administration.



Success due to good farm management plus rations supplemented with Peebles' M-N-C

CRD (chronic respiratory disease) is the poultry affliction that many authorities state is by far the most frequent disease cause of poultry condemnations and is responsible for the loss of hundreds of thousands of dollars in poultry profits annually.

But in the 15 years the experimental farm of Western Condensing Company has been raising poultry, not a single case of CRD has occurred! And they have raised thousands upon thousands of broilers, layers and turkeys!

This amazing record results from two factors: The use of Peebles' M-N-C in all poultry rations plus good management.

M-N-C consists of appetizing milk nutrients that keep birds on full feed constantly, even during stress. And it is stress that leads to most cases of CRD.

Good management, too, is exceptionally important in CRD prevention. Crowding, poor ventilation, unsanitary conditions and other inadvisable practices pave the way for stress and CRD.

NOW! Build low-cost CRD protection into all your poultry feeds with Peebles' M-N-C

It's true! Now you can offer poultrymen CRD protection right in with their regular rations by adding M-N-C to your poultry feeds!

Unlike ordinary dried whole whey, M-N-C contains a high concentration of delactosed milk nutrients and whey factor. It develops bonus digestive organisms for more complete utilization of the feed components...keeps appetites sharp...builds strong, *natural* resistance to stress. *And research proves stress leads to the bulk of all cases of CRD.*

Compared to costly medications, M-N-C is an extremely low-cost way to combat stress and CRD. And birds never build immunity to healthful milk nutrients!

And remember this...the use of economical M-N-C in your feeds means you can offer poultry raisers protection against CRD at a price that won't cut into their razor-thin profit margins.

Add the strong sales plus of Peebles' M-N-C to all your poultry feeds. Write or phone us today for complete details and prices.

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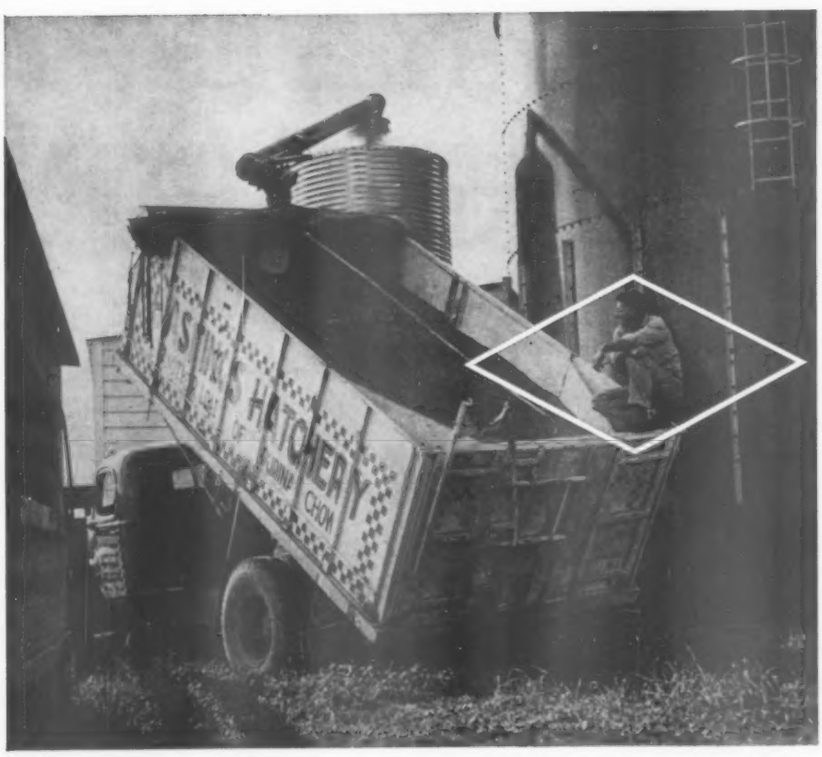

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Saving money on handling costs, time and maintenance with an all-purpose Dodgen bulk body . . . in an easy one-man operation.

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Bulk feed driver, Thomas McBurney of Hastings Hatchery says "This Dodgen rig is the best I've seen. It's easy to operate in all kinds of weather and works out real well for handling bulk and bags on the same trip."

Compare Dodgen quality, special features and cost with any others . . . you'll see why Dodgen sales have soared as the word gets around.

Take advantage of the five new regional Dodgen sales centers and mounting points. Let us show you all the reasons why a Dodgen bulk body means more profit and easier operation to you. Call today for free, no-obligation information at your nearest Dodgen office!

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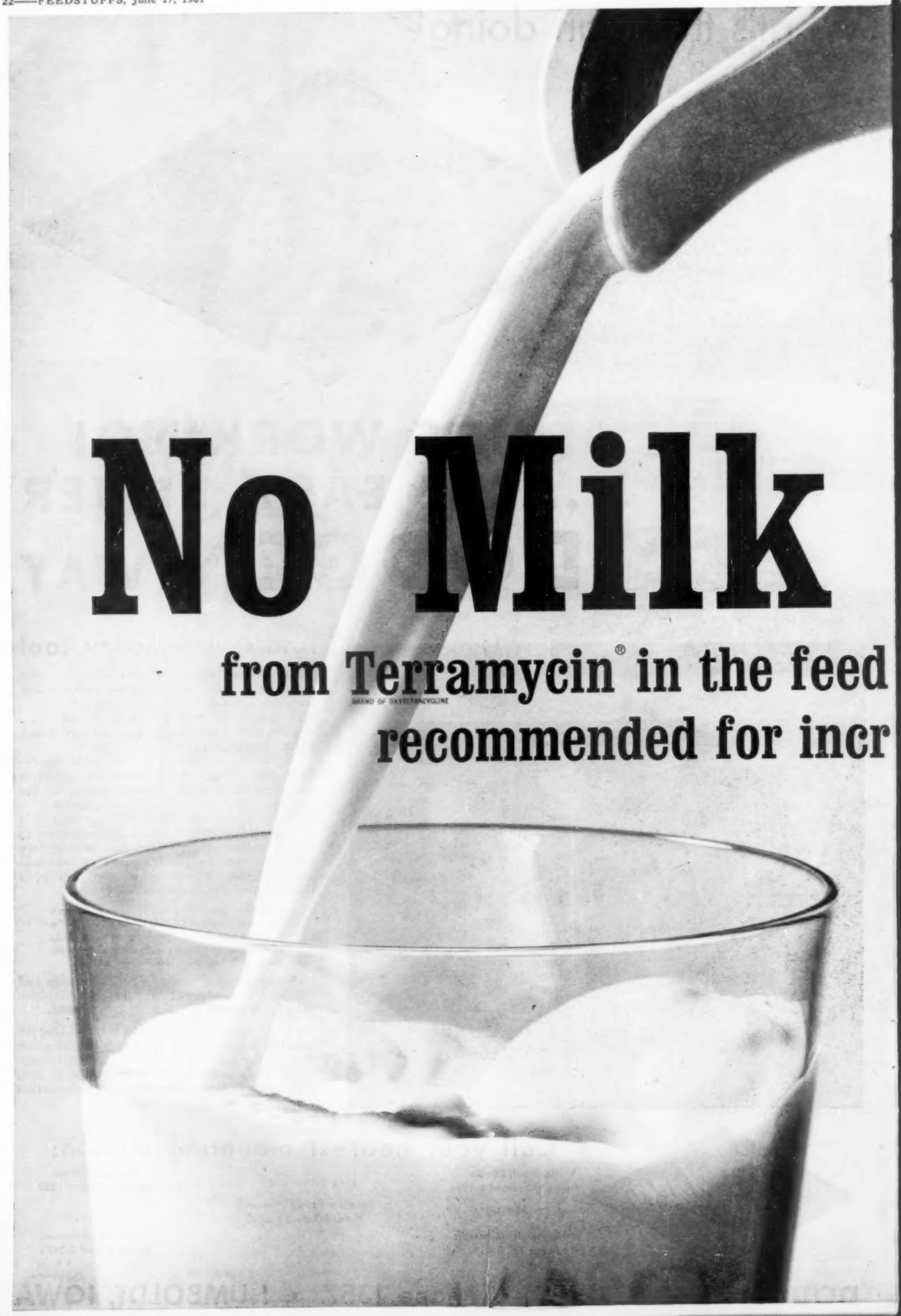
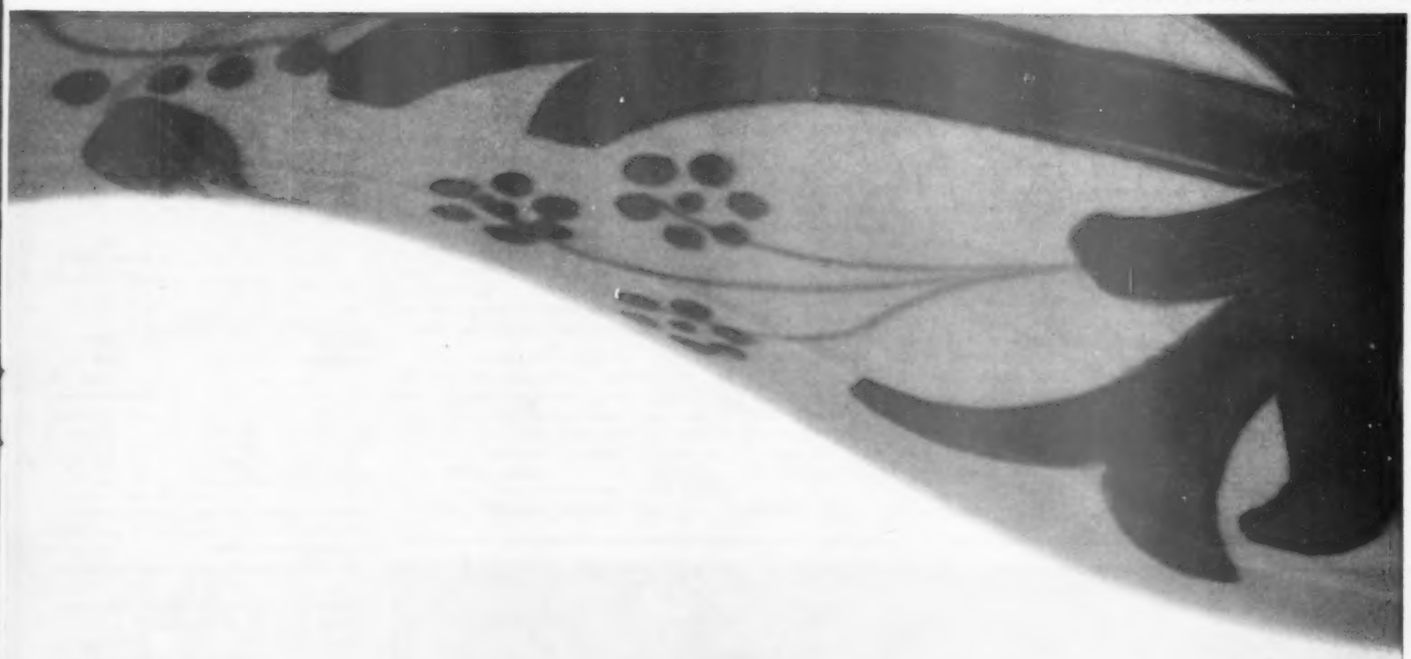

No Milk
from Terramycin® in the feed
recommended for incr



Residues

when it was used at the level easing milk production

HERE are the answers to important questions about feeding Terramycin to dairy cows for increased milk production:

•

What led to the increased milk production claim you can now add to your feed tags? Tests with over 2300 dairy cows over a 186-day lactation period showed that Terramycin produced substantial increases in milk production.

•

How about milk residues? There were no detectable milk residues where Terramycin was fed at the recommended level of 75 mg. per cow per day.

This was shown by both milk assays and by testing for cheese and other culture-retarding activity. No Terramycin was found present.

•

Did Terramycin produce a profit? Yes.

•

How much? Nearly $7 for every $1 invested.*

•

How much did the Terramycin cost? About two-thirds of a cent per cow per day.

**Based on using TM®-10 in the feed*

How much extra milk did it produce? About four and one-third cents' worth per cow per day.

•

How does this add up on a herd basis? Every 36 cows on Terramycin supplemented feed produced more milk than 37 on regular feed—or—less than $6.90 worth of Terramycin per month adds nearly $47.00 to the monthly milk check.

•

How much extra labor does it take? There is no extra feeding labor when the Terramycin is added to presently-used supplements.

•

Any other benefits? Yes. The level recommended for increasing milk production also aids in the prevention of scours *and* in helping to reduce incidence and severity of bloat.

•

How much Terramycin should be added? For complete feeds or supplements, add this much TM®-10 to a ton of feed:

WHEN COWS EAT THIS MUCH...	ADD THIS MUCH TM-10 PER TON OF FEED
30 lbs. per day	0.50 lbs. per ton
25	0.60
20	0.75
15	1.00
10	1.50
8	1.88
6	2.50
5	3.00
4	3.75
3	5.00
2	7.50
1	15.00

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Highly Mineralized Water Not Palatable To Farm Animals

ST. LOUIS—The effect that mineral content has on the fitness of drinking water for farm animals has been reported by the Ralston Purina Co. in its Nutrition News Bulletin.

The report says that due to lack of palatability, farm animals will not voluntarily drink a highly mineralized water (one containing more than 1,000 ppm of minerals such as the carbonates, bicarbonates, chlorides and sulphates of sodium, postassium, magnesium and calcium).

Other information in the report on the fitness of water for consumption by animals was summarized as follows:

When forced to drink it, farm animals can gradually acquire a tolerance to the taste and physiological effects of water containing from 10,000 to 15,000 ppm of these minerals, depending on the nature of the minerals, without detriment to health. Beyond these limits of tolerance the water is toxic and unfit for animal consumption.

The time required to develop a tolerance to these minerals to an extent permitting water intakes sufficient for the needs varies from a few days to a few months, depending on the amounts and kinds of minerals present. During the build-up period, water intakes, feed intakes and efficiency of feed utilization are depressed. This is reflected in slowed growth, decreased rates of lay and decreased milk production.

Salts of lead, arsenic, selenium, chromium (hexavalent forms) and fluorine are cumulative poisons when present in drinking water in excess of the mandatory limits (shown in Table 1).

These minerals are not eliminated from the body fast enough to prevent the buildup of toxic levels in the liver, bones and other parts of the body. Water containing these minerals in excess of the mandatory limits is unfit for drinking except for brief periods.

Salts of zinc, copper, manganese and iron are not cumulative poisons and are not toxic when present at the permissible levels shown in Table 1. These permissible levels are based on considerations of palatability. These minerals become dangerously toxic at levels higher than these permissible levels, but at levels much lower than the toxic levels of sodium, potassium, magnesium and calcium.

Animal Tolerance

The ability of animals to tolerate highly mineralized water varies with their age and conditions, and with the amount and kind of minerals present. Young animals are much less tolerant than older ones, laying hens less than nonlaying ones, and pregnant and lactating mammals less than non-pregnant and non-lactating ones.

TABLE 1—Mineral Tolerances for Human Drinking Water*

	(1) Mandatory upper limits in parts per million
Lead	.1
Arsenic	.05
Selenium	.05
Chromium (hexavalent)	.05
Fluorine	1.5
	(2) Nonmandatory upper limits ppm
Zinc	15
Iron	.3
Manganese	.3
Copper	3.0
Magnesium	1.25
	(3) Nonmandatory upper limits ppm
Chlorides	250
Sulfates	250
Total solids (desirable)	500
Total solids (permissible)	1,000

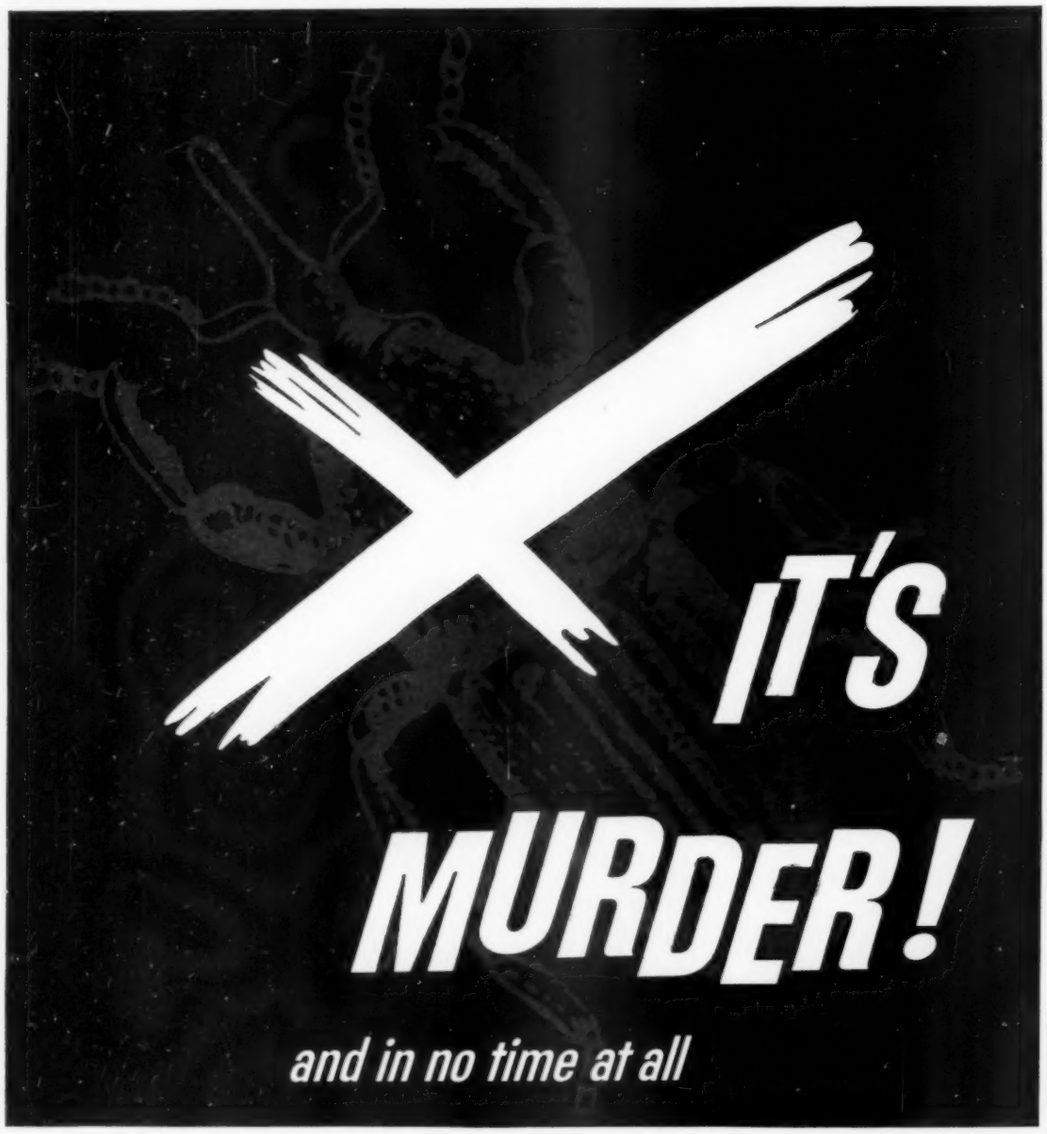
*These limits are based on considerations other than toxicity such as lack of palatability and excessive hardness.

The degree of fitness of a mineralized water for animal consumption can be determined by a feeding test with two groups of similar animals receiving the same ration with one group on the water of unknown value with observations on water and feed intakes and on efficiency of feed utilization.

A quantitative mineral analysis of a water is highly informative as affecting its content of lead, arsenic and other toxic minerals. In only a few cases will these minerals be present in harmful amounts.

In nearly all cases the decisive factor affecting its fitness will be the amount of sodium, potassium, magnesium and calcium. When the sum total of these four minerals lies between 1,000 to 15,000 ppm, the water will be of doubtful value. Above these limits clinical symptoms of toxicity begin to be evident followed by a rapid loss in body weight and eventual death.

Since no two waters are similar in their relative content of sodium, potassium, magnesium and calcium, no attempts have been made to determine the exact magnitude of the detrimental effects on water and feed intakes, and feed efficiencies during the time required to develop tolerance to them. The detrimental effects will be roughly proportional to the total amount of these four minerals in excess of 1,000 ppm, the report said.



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Kentucky Scientists Synchronize Estrous Cycle in Ewes

LEXINGTON, KY.—University of Kentucky Agricultural Experiment Station researchers last season used a substance which enabled them to bring 38 of a flock of 40 ewes into heat at very close to the same day.

When half the ewes were slaughtered a few days after breeding, says Ray Dutt, researcher, 70% of the eggs recovered had been fertilized.

Mr. Dutt says the material is known as Provera. It blocks ovulation and heat of the ewes as long as administered. It is given in the grain ration at the rate of 50 milligrams per animal daily. The substance is similar in action to progesterone, which is produced naturally in the ovary.

Thirty-eight out of 40 of the test ewes actually came into estrus within two or three days of withdrawal of the drug, he said. This is considered a very close control of time of estrus or heat.

The unslaughtered ewes will be checked to ascertain conception.

Mr. Dutt said the material could be helpful to farmers. If proved out in more tests, it might enable sheepmen to control estrous cycles of flocks. Then artificial insemination would be much easier. All ewes in a flock could be inseminated at one time. Now, the system is more difficult because ewes may come into estrus at entirely different times.

The material also has been used experimentally in swine and beef cattle. But Mr. Dutt cautions that the material should not be used by farmers until it has been thoroughly checked out.

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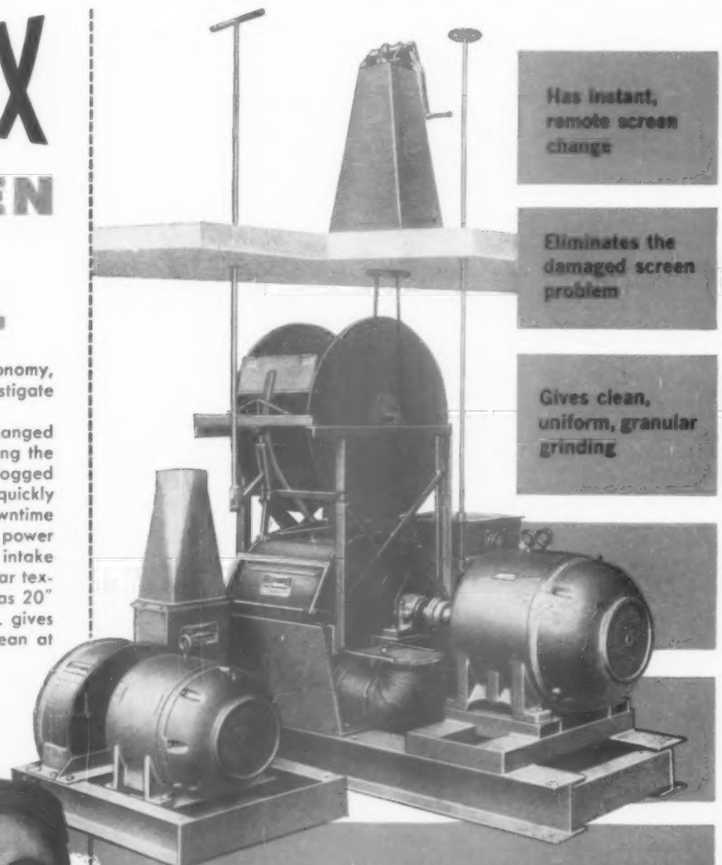
Whether you are interested in speed, convenience, economy, capacity or quality of grind . . . it will pay you to investigate the Kelly Duplex Remote Screen Change Hammermill.

Here are just a few reasons why: • Screens can be changed instantly by a single turn of a crank . . . without stopping the mill . . . and without leaving the service floor • Torn or clogged screens, regardless of the amount of damage, can be quickly and easily removed and replaced without costly downtime • Mill is guaranteed to grind more grain with the same power than any other make—or your money back • Special intake arrangement assures a clean, uniform product of granular texture . . . mill does not whip feed into a floury dust • Has 20" throat—delivers high capacities • Built low to floor . . . gives you a larger pit area • Separate blower keeps mill clean at all times • Heavy steel construction throughout assures top performance and long life under hardest use.

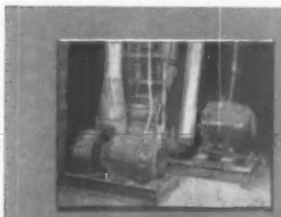
Make your own "point-for-point" comparison. Mail card today for literature and full details. See for yourself how much more you get with a Kelly Duplex Remote Screen Change Hammermill . . . and how much more it will do for you.



Has instant, remote screen change

Eliminates the damaged screen problem

Gives clean, uniform, granular grinding



"In our elevator at New Hope, Ohio, we have a Kelly Duplex Remote Screen Change Hammermill powered by a 75 HP motor on the mill and a 30 HP motor on the blower. It saves us time and steps in servicing customers . . . and gives us a product that looks like it had gone through a grader to get a more even grind. I would recommend this mill to anyone."

Bob Armacost

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- ☐ Portable Screw Elevator
- ☐ Corn Cutter and Grader
- ☐ Corn Sheller with Blowers
- ☐ Pitless Corn Sheller
- ☐ Regular Corn Sheller
- ☐ Magnetic Separator
- ☐ Cob Crusher
- ☐ Bucket Elevator
- ☐ Pit Auger
- ☐ Chain Drag
- ☐ Twin Molasses Mixer
- ☐ Instant Screen Hammermills
- ☐ Corn Crusher-Regulator
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FEEDSTUFFS

Development of High Energy Rations for Ruminant Animals

By Dr. James D. Schuh
University of Nevada

EDITOR'S NOTE: *The accompanying article is from a talk presented by Dr. James D. Schuh, extension dairy specialist, University of Nevada, Reno, at the 37th convention of the California Hay, Grain & Feed Dealers Assn., in San Francisco. The article includes information from studies on the use of fat, as well as other aspects of high energy rations.*

So much has happened in our country during the past decade that it is almost inconceivable. Phenomenal advances have been made in almost every avenue explored by man. Even within the livestock and feed industry we have witnessed some marked and dynamic changes. However, it is not what we have accomplished that enhances our prospective, but primarily what still lies before us on the horizon.

For example, in my own field, dairying, numerous cows are producing over 20,000 lb. of milk a year, and many dairymen have yearly herd averages well over 15,000 lb. of milk per cow. Other factions of the animal industry, beef, sheep, swine and poultry have also made marked progress towards greater and more efficient individual productive output.

But while many animals have achieved high levels of production, many others, inherently capable, have undoubtedly failed to reach their potential level of productive output because of improper feeding or inadequately formulated rations.

Herein then, I believe, lies the challenge to nutritional research and the feed industry—the development of feeding programs and rations designed to meet the higher nutrient requirements demanded by higher levels of productive output. During the past decade this challenge has motivated the use of special feed additives including antibiotics, enzymes, hormones, tranquilizers, and various other substances which in many cases have successfully stimulated production. But it is clear from the literature and our experiences that, in general, the benefits derived from the inclusion of various additives in the diet depend largely upon the nutrient makeup of the ration, and particularly the energy content.

I am sure it would be repetitious if I were to simply review the literature on high energy versus low energy rations with respect to differences in productive output. It is certainly no news to the livestock man and feed dealer that the net energy content of a ration is an important criterion in the measurement of its productive capacity. Very often when the energy needs of high producing animals are complied with, many of their other essential requirements will also be satisfied. For example, when dairy cows are fed a good quality legume roughage the primary limiting factor in meeting their productive requirements is energy.

Emphasis on Energy

Today, the increasing focus of attention on energy is reflected in the greater use of pelleted feeds and high or all concentrate rations. These are fed for the primary purpose of getting more energy into the animal to boost productive output. But while the essentiality of the energy content of the diet is well recognized, its importance in formulating rations is often superseded by the emphasis placed on other dietary nutrients.

In many cases, therefore, the primary objective of the diet to supply an adequate amount of energy in a simple ration is often ignored in favor of a more complex mixture which may or may not satisfy the needs of the animal body for energy. This is of particular importance in ruminants where efficiency of energy transformation is affected by a multitude of complex interactions of which the quantity and quality of the ration are the prime aspect.

In this respect, particular attention has been given the fiber content of feeds as one of the major factors influencing their net energy value. It is a well known fact that as the fiber content of the ration increases the energy losses associated with its utilization also increase. It is estimated that the energy value decreases about 2½% with each 1% increase in fiber content. Moreover, increases in fiber have also been shown to have a depressing effect on the digestibility of other nutrients, notably protein. Therefore, in formulating high energy rations it is important that the fiber content of the mixture be maintained as low as possible in order to obtain the greatest energy utilization per unit amount of feed. Concentrate mixtures containing the same percentage of protein may easily vary enough in fiber content so that there is a considerable difference in feeding value.

Formulation

The formulation of high energy concentrate mixtures does not require a variety of eight or 10 different feedstuffs or two or three different protein sources. On the contrary, high energy rations can be obtained with simple mixtures made up primarily from any one of the high energy cereal grains including barley, milo, corn, etc.

Molasses and fat provide supplemental forms of energy when used in appropriate amounts. A protein supplement can be included, if needed, but special attention should be given to the productive value of the different protein rich feeds, especially for dairy cows. The use of protein rich feeds when additional protein is not required is seldom economical except when such feeds are comparable in price to low protein, high energy feeds. In these cases selection should be based primarily on their net energy value.

Urea can be well utilized in high energy rations. But urea is not a source of energy like protein rich feeds; therefore, its energy deficiency must be reflected in the price of the ration to be of benefit to the stockman.

Vitamins and minerals should be included in high energy rations according to need and not as a means of making the feed more attractive because of their appearance on the feed tag.

While well balanced, high energy rations can be made from combinations of low fiber, high energy feeds, they cannot be made up from oat and cottonseed hulls, screenings, large amounts of light weight feeds such as barley and oats, ground alfalfa and other similar high fiber feedstuffs. This, of course, does not mean that certain byproduct feeds cannot be used to advantage, especially when they supply a less expensive source of energy than the cereal grains. Many of these, however, may increase the bulk of the ration thereby decreasing the rate of nutrient intake, a factor of particular importance where dairy cows are milked and fed in parlors.

Special care should be taken to see that alfalfa pellets are made from the best low fiber hay available. Pelleting does not increase the digestibility of lignin. Also, feed manufacturers should check the fiber and moisture content of cereal grains and other concentrates as a means of helping to maintain ration quality.

Fat Studies

In Nevada, cereal grains are not produced in sufficient amounts to meet the demands of the livestock industry. However, under our usual feeding regimes, the quantity and quality of alfalfa hay fed to dairy cows is generally sufficient to meet the major portion of their nutrient requirements. Since our basic problem is essentially one of supplying adequate energy, it seemed desirable to investigate the productive value of animal fat in formulating high energy rations.

Several studies have been made concerning the addition of 4 to 9% animal fat to the ration of dairy cows as a means of increasing the energy content of the diet, but the results have been variable. Increasing the fat level of the diet during hot weather may help maintain or increase milk production by decreasing the heat increment, but further investigation is needed along this line.

It is generally accepted that the two carbon fragments evolved from the degradation of fatty acids may unite with oxalacetate and enter the Krebs cycle. In view of the fact that propionate can be converted to oxalacetate, it seemed plausible that propionate might serve to increase fat utilization. Therefore, a study was initiated at the University of Nevada to investigate the value of sodium propionate at a level of 2.8% and stabilized animal fat added at the rate of 7.5% to a concentrate mixture containing 70% barley and equal parts oats, wheat bran and beet pulp. At the end of the 24 week reversal-type feeding experiment, there was no significant difference between treatment groups in pounds of fat-corrected milk produced.

In another study, 1 lb. of stabilized animal fat was used to replace 2.5 lb. of barley up to a level approximately 10% in a meal concentrate and pelleted mixture. Feeding the fat-concentrate mixture at a grain to milk ratio of 1:6 resulted in a highly significant increase of about 9% in milk production. Animals fed the meal concentrate ration with fat or the pelleted fat mixture at a level of 1:8 produced an average of approximately 5% more fat-corrected milk than the control group receiving the basal diet without added fat.

In a more recent experiment an attempt was made to increase the energy content of the diet of lactating cows by the addition of fat to an alfalfa pellet. The alfalfa-fat pellets were composed of 78% alfalfa hay, 15% animal fat, 5% molasses and 2% minerals. There was no significant difference in the production of fat-corrected milk when cows were fed the alfalfa-fat pellets at a level of 1:6 in comparison to cows receiving a conventional concentrate mixture at the same rate. Also, there was no increase in production in a third group of cows receiving a daily average of about 11 lb. of the fat pellets fed in the corral. These results are promising, but need further investigation.

While in our studies the addition of fat to the diet did not always increase milk production, it should be noted that it did maintain production. In some studies the increased production with high energy rations containing fat has been offset by their higher cost in comparison to energy from cereal grains. But in our second and third experiments the high fat rations proved to be more economical. Therefore, under certain conditions the addition of fat to the ration may be economically advantageous.

More Study Needed

In the limited number of studies that have been conducted under various dietary conditions, it is apparent that the factors influencing the utilization of fats by ruminants are still largely unknown. Moreover, the re-

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sults show that the addition of energy to the diet involves much more than merely the introduction of calories.

In formulating high energy rations the need is evident for more up-to-date information on the net energy value of feedstuffs. Work being done in various areas, including California, indicates the necessity for continuous revision of our feeding standards, especially under more local conditions.

It is evident that we must have a far more complete understanding of the utilization of energy by ruminant animals if we are to find the secrets that will unlock the energy in a ration for greater productive output.

New Cattle Association

EXPERIMENT, GA. — More than 300 cattle growers and county agents have banded together to form the Georgia Cattlemens Assn. to work toward improvement of beef cattle in Georgia.

Ben Smith, Thomasville, was elected temporary president. A. J. Singletary, Blakely, was made vice president and Robert Blalock of Woodbury was chosen secretary.

Membership is open to any person, firm, corporation or association related to the cattle industry in the state.

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North Dakota Analyzes Distribution Patterns For Dressed Poultry

FARGO, N.D.—A North Dakota State University study indicates that North Dakota turkey producers probably would obtain the most transportation advantages in shipping their birds to the Northeast or to states near the Great Lakes. And the same study notes that it appears that North Dakota could market more than 15 million pounds of chickens, including broilers, in Montana.

These conclusions are from a university bulletin, "Distribution Patterns for Dressed Poultry," the second in a series of reports covering investigations of distribution of selected agricultural commodities. These reports analyze shipment patterns which would minimize costs of transporting commodities from regions of surplus production in the U.S. to regions which are deficit in these commodities.

Thor A. Hertsgaard, author of the dressed poultry bulletin, notes that North Dakota has a locational advantage of about 1½¢ lb. for turkeys over Pacific Coast regions and a locational disadvantage of about 1¢ lb. for turkeys relative to Delmarva. "Advantages may be offset by other advantages such as production cost economies," says Mr. Hertsgaard, a North Dakota State agricultural economist.

Regarding shipments of broilers and other chickens to Montana, Mr. Hertsgaard concludes: "North Dakota could expect a locational advantage of about 1½¢ lb. over the Southeast and about ½¢ lb. over the Corn Belt."

It appears, according to Mr. Hertsgaard, that Pacific Coast producers, being the greatest distance from the principal eastern markets, receive as much as 3¢ lb. less for dressed turkeys than producers in other regions. He says Delmarva has the greatest locational advantage over other exporting regions. Expected price differences between most other producing regions are less than ½¢ lb. dressed weight.

"These price differences are not great and it is likely that other factors such as differences in costs of production may offset freight cost advantages," the bulletin author notes. "More research on relative costs of production is necessary to determine the areas where production increases would be the most efficient."

Analysis of distribution patterns for broilers and other chickens indicates that differences between producing regions are 1½¢ lb. dressed weight or less. "Prices in the exporting regions advance as one moves north and west from the intensive broiler producing area of the Southeast," Mr. Hertsgaard notes. "These price differences may be of less consequence with respect to locational advantage than other considerations such as interregional differences in costs of production."

17 Regions Studied

Mr. Hertsgaard's study investigated the turkey marketing structure with respect to interregional shipments among 17 regions in the U.S. A transportation model analysis was applied to this data for each of the years 1950-58 and to estimates for the year 1975. A similar analysis was made for broilers and other chickens for 1958. Mr. Hertsgaard notes that his findings are pertinent for general trade patterns only among the 17 regions defined.

For those interested in further details of Mr. Hertsgaard's study, the bulletin, No. 431, may be obtained from: Department of Agricultural Economics, Agricultural Experiment Station, North Dakota State University, Fargo, N.D.

Calves, Lambs Do Well On Stilbestrol Implants

STATE COLLEGE, MISS. — The use of stilbestrol implants in nursing calves and suckling wether and ewe lambs was reported to be of value in tests conducted recently by researchers at Mississippi State University.

In two of three tests at Mississippi, calves responded well from a 12 mg. implant of stilbestrol. In the first test, stilbestrol increased average daily gain 0.2 lb., and in another test, stilbestrol implants produced an additional 0.14 lb. daily gain.

The 0.2 lb. additional daily gain provided a percentage increase of 24.38. This was an increase of 29.7 lb. gain per steer for the 147 day period. The 0.14 lb. additional response was equal to 18.5 lb. per calf or 7.45% more than the control group.

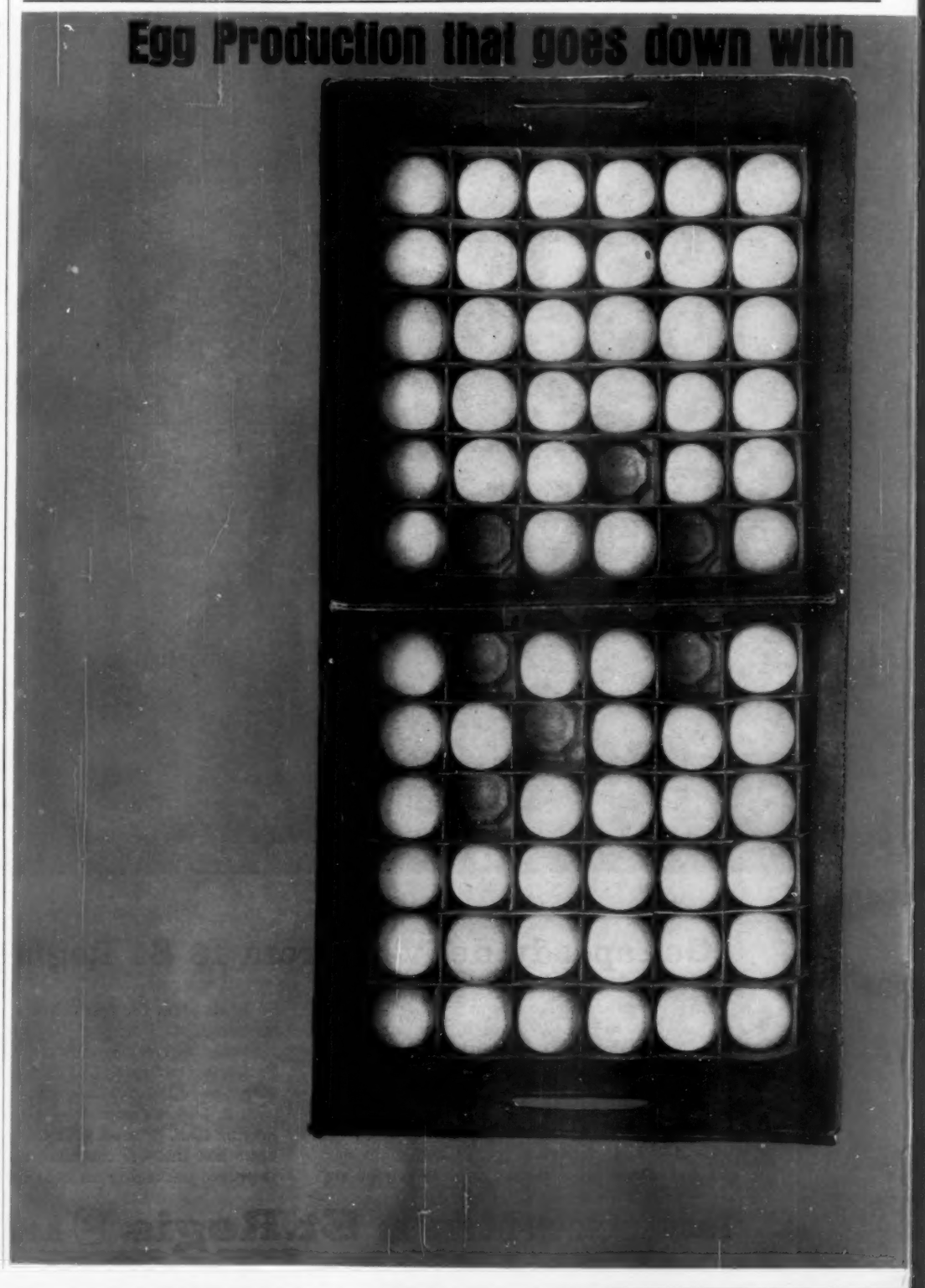
There was no response from the stilbestrol implant in a third group of calves, but researchers pointed out that a stilbestrol implant is not a substitute for feed; it merely serves to stimulate gain when adequate amounts of feeds are fed.

Suckling wether and ewe lambs grazing winter pasture and implanted with 3 mg. stilbestrol gained 0.05 lb. per day more (15%) than non-implanted controls in the Mississippi tests.

There was no undesirable side effects from implanting suckling wether or ewe lambs grazing winter pasture, the Mississippi researchers reported.

They said the weanling wether lambs grazing Ladino clover and implanted with 3 mg. stilbestrol gained 18% more than controls, however there was an incidence of prolapse.

Aureomycin supplied in the ration at the rate of 10 mg. per pound of feed did not have a beneficial or adverse effect as measured by rate of gain, they said.



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Says Sheep Parasites Can Become Resistant To Phenothiazine

URBANA, ILL.—Sheep parasites can become resistant to phenothiazine, University of Illinois researchers say.

Dr. Norman Levine, parasitologist of the Illinois College of Veterinary Medicine, said tests show that some sheep parasites have developed resistance to phenothiazine. Dr. Levine worked with a team of university veterinarians, animal scientists and statisticians in making the tests.

"We tested animals before giving them phenothiazine, then after giving them regular doses and finally after giving them double doses," Dr. Levine explained. "Phenothiazine had no effect on stomach worms."

Testing was done by counting the eggs laid by the worms. There was no difference in the number of eggs before and after treatment, it was reported.

Like many other discoveries, this one was made by chance. While teaching graduate students how to recognize parasites, Dr. Levine had them gather fecal samples from a nearby sheep farm.

"The students were supposed to get some samples from sheep that were suspected of having worms," Dr. Levine said. "But when the group arrived at the farm, nobody was there, so they gathered samples at random.

"Back in the classroom the students examined the samples and found plenty of worms to identify. But this routine assignment netted surprising results, for the students had accidentally taken samples from sheep that were supposed to be completeley free from worms."

After this first discovery, Dr. Levine said he and the class enlisted the aid of other veterinarians, animal scientists and statisticians, and testing began.

"Sheep on this farm had been treated with phenothiazine for 19 years," Dr. Levine said. "This is the first time phenothiazine resistance has been found in Illinois, although researchers had discovered it before in other parts of the country.

"Research workers are now trying to find effective treatments to combat these parasites."

Harold Anderson Feted

MAUMEE, OHIO—Harold Anderson, senior partner of the Andersons, Maumee, Ohio, Grain Co. has been named "Marketing Man of the Year" by the Northwest Ohio chapter of the American Marketing Assn.

He is credited with leading the way toward developing facilities to make Toledo a major St. Lawrence Seaway grain port.

South Dakota Study On Yolk Hue Reported

BROOKINGS, S.D. — An alfalfa meal supplement in layer diets may restore the dark yolks demanded by egg processors, who get premium prices for them from noodle manufacturers and cake bakers, it is reported in South Dakota Farm and Home Research.

Experiments using seven layer diets showed that 20% alfalfa meal supplement caused hens to produce eggs dark enough to satisfy commercial breakers. Conducting the research were Dr. C. W. Carlson, F. L. Shinnick, M. A. Sneller and Dr. A. W. Halverson of the poultry and biochemistry departments of South Dakota State College. (A detailed report on the work was carried in the Feb. 4 issue of Feedstuffs on page 52.)

Yellow corn was the diet's main energy source, the South Dakota publication said.

On the 20% supplement, the diet contained 35.6% mg. of xanthophyll per pound of ration. Ninety-eight percent of yolk pigment is derived from xanthophyll, the researchers say.

They point out that at least 25 mg. is required for the dark color favored by processors. However, they commented that for table eggs, probably as little as 7 mg. of xanthophyll per pound of diet would produce the yolk color generally preferred by consumers.

Because of uniformly lighter colored eggs produced by confined layers and the economic importance of dark yolks, the researchers say that processors may assume more supervision over egg production, perhaps to the extent of recommending diets.

HOG RANCH ORGANIZED

MONROVIA, CAL.—The Santa Fe Feeding Co. has filed articles of incorporation asking $100,000 capitalization to operate a hog ranch here. Incorporator-directors are Ralph A. Thorsen, Billie F. Thorsen, both of Monrovia and James S. Menzies, Arcadia.

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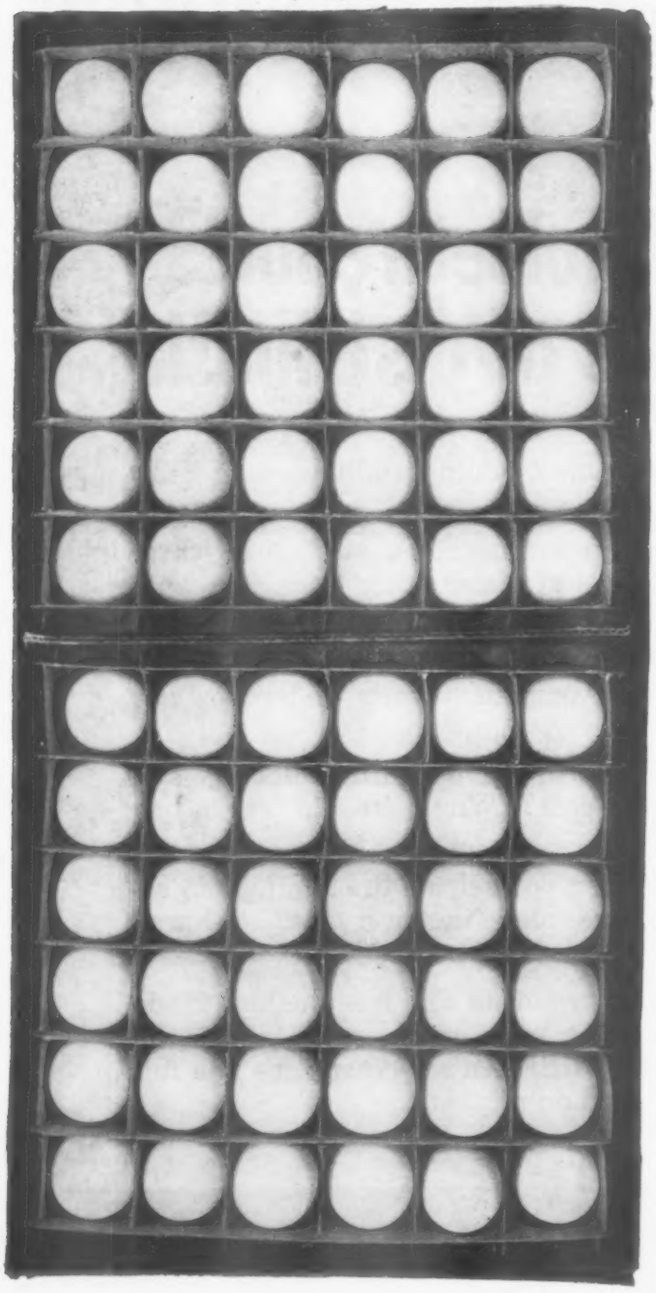

Laying hens fed SERPASIL Premix in the diet outproduce controls. Field trials conducted in Arizona offer clear-cut evidence that laying hens given SERPASIL Premix in the feed can outproduce birds on conventional diets during periods of heat stress.* Tests undertaken with White Leghorns during the hot summer months (1958) demonstrated substantial differences between the 2 groups. *See table below.* In a second trial (summer, 1959) the medicated group, consisting of more than 5000 layers, maintained an "...egg production considerably above the average of neighboring poultry farms."*

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*Parker, E. L.: Paper presented at The Second Conference on the Use of Reserpine in Poultry Production, The Institute of Agriculture, University of Minnesota, St. Paul, Minn., May 6, 1960.

CORRELATION OF TEMPERATURE AND PRODUCTION RATE OF LAYERS GIVEN FEED CONTAINING SERPASIL (compared with a nonmedicated group)

Dates 1958	Average Inside Temperature	Production Rate (%)	
		Control Group (50 birds)	Medicated Group (50 birds)
25 Days in July	99.84°F	49.6	70.9
31 Days in Aug.	93.9°F	51.3	69.9
30 Days in Sept.	90.5°F	58.06	68.14
20 Days in Oct.	85.6°F	72.0	71.9

(Adapted from Parker*)

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Progress of the Fresh Fancy Quality Egg Program Told

COLLEGE STATION, TEXAS — Progress of the U.S. Department of Agriculture's Fresh Fancy Quality Egg Program was reported by W. R. Jenkins, USDA, to poultrymen who gathered here for the Texas Cage Clinic.

Referring to the program, Mr. Jenkins said that standards, grades and labeling must be clear, concise and meaningful. He said that this is no time to use tags which are mysterious or abstract, communication is very difficult even under the best conditions.

Mr. Jenkins pointed out that the Fresh Fancy Quality Egg Program became officinl Sept. 15, 1960, although the program was tested for a year and a half prior to that time. In the beginning and still today we hear it referred to as the farm fresh program, fancy farm or even farm fancy egg program, he said.

"So many different combinations have been used, it isn't easy to suddenly change our direction or introduce new terminology. We are all humans and consumers as well as many other things," he told the group.

Fresh fancy quality indicates that the eggs so identified are produced and marketed under controlled optimum conditions to meet the highest quality standards of the USDA. It is a quality control program for eggs based on proper conditions on the farm and the handling of the product, he said.

"We hear many references to specification buying, especially in light of the reduction in number and increase in size of poultry flocks and the decreased number of buyers for eggs," Mr. Jenkins said. "In other words, fewer buyers secure eggs from fewer producers. This means larger purchases from greater distances. Confidence and dependability are the watchwords of this and any other product where these two factors are concerned. With proper designation and well-defined and understood standards we get more uniformity upon which we can depend.

"It should be mentioned briefly that eggs qualify on the basis of Haaugh unit score for a sample of eggs from each shipment plus certain management practices on the farm. The Haugh unit ranges from 0 to 110 and is based on the heights of the albumen at the edge of the yolk and the weight of the eggs in the sample. Top quality eggs score from 72 to about 100 Haugh units."

Producer Requirements

The management and marketing requirements are frequent gathering, rapid cooling, separate packing by flocks, minimum Haugh unit score of 72 on a moving average, sampling by government graders, removal of inedible, checked, and poor shelled eggs, 10-day expiration date on the retail shelves and records kept by government graders, Mr. Jenkins stated.

"Since this is a voluntary program and since it represents a drastic development in egg grading, we cannot expect immediate adoption," he said. "In fact, Iowa studies show that it was about six years after first hearing of hybrid corn before the average farmer started to use it. Now there are only a very few who do not.

"At present there are a few over 20 egg handlers in 13 states participating in this egg quality control program. Three of them are located in Bryan, Dallas and Weatherford, Texas. Five plants in the other states are participating in the breakout program but are doing no labeling.

"These figures indicate widespread acceptance of the program, keeping in mind the short time of its existence. Comments such as 'extremely good retailer and consumer acceptance; its a measurement we can understand and repeat' are often heard. It's really objective in view of the requirements set. 'Fewer complaints from customers and fewer complaints from producers' was the way one processor put it. This seems to sum up pretty well the feelings of most handlers," he explained.

New Grading System

Mr. Jenkins pointed out that the new grading system is designed to meet the needs of the egg industry both now and in the future since it is well adapted to new mechanized methods of egg handling such as flock or bulk candling, electronic blood spot detectors and other mechanical selection devices not yet perfected. "It is my opinion," he said, "that this is one of the most objective grading programs now available for any agricultural commodity. Produced under controlled conditions we know what to expect even when we cannot see inside."

The fresh fancy quality, with modifications from time to time, should continue to grow and expand. It represents one of the best examples of utilization or application of reliable information based on research results and factual data. The standards are not arbitrarily set, but based on what the consumer has shown to be his preference. This, in itself, indicates the value of such a program. Times and conditions change and so will this program, but it does come closest to specification production for specification buying, he told the group.

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Additives Booklet Is Part of Chemists' Information Program

WASHINGTON—The Manufacturing Chemists Assn., Inc., reports it has distributed approximately 75,000 copies of its booklet, "Food Additives: What They Are — How They Are Used," which describes the value of food additives, how they are developed and the precautions taken by both industry and government to maintain a high degree of safety.

MCA says the booklet is a part of the chemical industry's three-fold information program on food additives and is the first in a series of activities which will: "(1) Provide key food professionals with accurate documented information about the story of food additives; (2) create an awareness and appreciation of the fact that our food supply continues to be better and safer, thanks to modern food technology, and (3) present, among other factors, a better understanding of the role of food additives in protecting food, improving quality and flavor and helping to make possible many of our convenience foods."

Chemical industry efforts as reflected in the MCA program are aimed at teachers and supervisors of high school home economics courses; college food teachers and administrators; home demonstration agents and extension specialists; magazine and newspaper food editors, along with radio and television broadcasters of food programs; nutritionists, dieticians and other public health leaders, and home economists in related industries.

In addition to the basic reference book, the association's program entails several "how to" supplements which are being provided food professionals with suggestions for making the subject of food additives more meaningful to those with whom they come in contact.

A periodic news letter on facts about food additives, and two film strips depicting the history of the world's food supply will be developed.

Expect 400 to Attend Colorado Beef Event

FT. COLLINS, COLO.—A Coordinated Beef Improvement Conference will lure 400 of the nation's leading beef producers, processors and merchandisers to Colorado State University here July 7-8.

Participants in the conference are expected to make recommendations for obtaining an "ideal beef animal."

The conference is sponsored by the American National Cattlemen's Assn., Colorado State University and the American Society of Animal Production.

ANRC Plans Nov. 1 Meeting in Washington

ROCHESTER, N.Y.—Dr. Stanley R. Ames, Distillation Products Industries, chairman of the Animal Nutrition Research Council, has announced that the program for the annual meeting of the ANRC has been finalized. It was prepared by the program committee with Dr. H. L. Wilcke of Ralston Purina Co. as chairman. The meeting will be held Nov. 1 at the Shoreham Hotel in Washington, D.C.

In addition to the reports from the technical projects committee headed by Dr. F. H. Bird, the morning session will include a discussion of progress in the chick edema problem by Dr. Leo Friedman of the Food & Drug Administration, and an address on problems in the use of laboratory animals for toxicity studies by Dr. B. M. Oser of Food & Drug Research Laboratories, Inc.

The afternoon session of the meeting will feature a symposium on vitamin A and carotene for ruminants. Participants will be Dr. H. D. Eaton of the University of Connecticut, Dr. A. L. Neumann of the University of Illinois, Dr. W. H. Pfander of the University of Missouri and Dr. Ames. The panel will be moderated by Dr. R. C. Nesheim of The Quaker Oats Co.

Featured speaker at the annual luncheon will be Dr. Max Milner of the food conservation division of UNICEF who will discuss United Nations' efforts in meeting protein foods scarcity.

New Drug Suppresses 'Heat' in Female Dogs

NEW YORK—Development of a new contraceptive drug that will suppress "heat" in female dogs without destroying their ability to bear healthy litters has been announced by Dr. Gordon G. Stocking, director of the Upjohn Co.'s veterinary division.

Called Prodox, the new drug is said to solve a perennial problem of the pet lover—how to schedule the arrival of pups only when he wants them.

Prodox is a synthetic version of progesterone, one of the hormones that regulates the female reproductive cycle and prepares the organs for pregnancy, said Dr. Stocking.

The drug, for the first time, makes it unnecessary to spay (remove the female organs by surgery) or to isolate the animal during estrus (heat).

"Prodox has been 100% effective in preventing estrus in trials that lasted up to two years with no ill effects on the 200 or more dogs tested by cooperating veterinarians," Dr. Stocking stated.

He said that, as a result of these findings, the Upjohn Co. is making the drug available through veterinarians.

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Illinois to Test Tooth Capping for Cattle

URBANA, ILL.—This was not an ordinary dentist's office. The usual dental instruments were replaced with king-sized ones, and the chair was transformed into a metal restrainer designed to keep the head immobile.

The patient was a cow whose teeth had worn down to mere stumps, making it almost impossible for her to eat and drink. Hers was a common but tragic ailment.

The "dentist," a veterinarian, quickly mixed a cement mixture and filled metal crowns shaped like Elsie's teeth. Elsie seemed completely unconcerned as she stood with her head in the restrainer and a block in her mouth to keep her tongue out of the way.

She patiently waited as, one by one, the veterinarian placed the cement-filled crowns over her stumps, which had been cleaned and dried. Within minutes, Elsie had a new set of incisors.

This new dental techniques will greatly prolong Elsie's life, according to Dr. R. L. Brewer, University of Illinois veterinarian.

"With this technique cattle can continue to eat," he explained. "Naturally, eating will increase their weight, prolong reproductive life and thus bring the farmer more money."

Until tooth capping was introduced last year, certain conditions made mature cattle worthless within three years. "Sand in sandy pastures or acid from beet pulp diets completely wore their teeth down," Dr. Brewer explained. "There was nothing anyone could do."

The situation was hopeless until a Nebraska dentist, Dr. Ward Newcomb, introduced this technique. He designed eight types of stainless steel crowns for different sizes and shapes of teeth. Then he tested the crowns with cattle for over a year before releasing his discovery.

Dr. Brewer spoke enthusiastically about the tooth-capping technique. "During the three-year experimental period, there was little wear on the crowns," he said.

He claimed that the technique is a tremendous money-saver, for now only the teeth and not the cattle have to be replaced.

Some people claim that cattle with capped teeth increase in weight and milk production. This and other claims will be studied by Dr. L. E. Boley, University of Illinois veterinarian, and other veterinarians during a five-year experimental program at the Dixon Springs Experiment Station.

"We'll cap one group of 7- and 8-year-old cattle with worn teeth and leave another tooth-worn group uncapped," Dr. Boley explained. "Through this controlled experiment we'll be able to find out how effective the capping is."

Jefferson Chemical Changes Announced

HOUSTON, TEXAS — Jefferson Chemical Co., Inc., has appointed P. R. Monaghan to the newly-created post of general sales manager, according to D. L. Griswold, vice president for marketing.

It was also announced that R. E. Werley, assistant sales manager, has been assigned to the company's New York office, and that he will have special responsibilities for direction of sales to the major chemical and chemical consuming companies with headquarters and plants on the Eastern Seaboard.

According to Mr. Griswold, the move was designed to gear the company's marketing department to rapidly expanding responsibilities in the areas of administration, planning and field sales leadership. "This has necessitated realignment of positions and responsibilities so that the most efficient organization may result," he commented.

Mr. Monaghan is now located at the company headquarters here, according to the announcement.

Mr. Monaghan has been eastern regional manager since 1957. He joined the firm in 1950 and has worked in a number of capacities. He was manager of the firm's technical service division several years.

Mr. Werley joined the firm in 1952 as a salesman in the New England territory. He has held a number of sales management positions, according to the announcement.

Earnings Down

NEW YORK—The continuing impact of the cost-price squeeze, coupled with non-recurring costs of starting new manufacturing facilities, accounted for a 45% decline in West Virginia Pulp & Paper Co.'s earnings for the first six months of fiscal 1961, it was reported.

The company said that net earnings for the first six months, ended April 30, amounted to $3,293,000, equal to 61¢ a share, as compared to $6,011,000, or $1.13 a share, for the same period in 1960. Sales for the first half were $121,669,000, more than $1 million over the volume of $120,586,000 recorded in the first half of 1960.

The brunt of the decline came in the second quarter when the company earned $1,601,000, or 30¢ a share, on sales of $61,492,000, as compared to a net of $3,597,000, or 68¢ a share, on sales of $63,715,000, for the second quarter of 1960.

David L. Luke, president, said that the drop in dollar sales volume in the second quarter, the first for the company since 1957, reflects the downward trend of industry prices, since physical volume is holding at a high level.

He noted, however, that the cost of bringing new installations into operation, now nearing completion, was the major reason for lower earnings.

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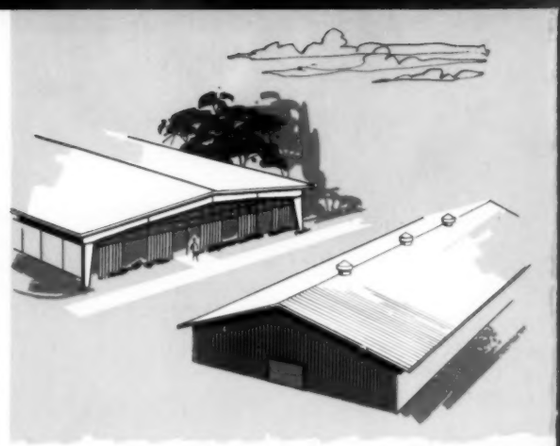
Turn the page for further details

Butler Buildings—Butler metal buildings fit every need. Want an attractive showcase salesroom? Simply specify Butler panels in beautiful, factory-applied Butler-Tone™ colors. Or if you prefer, the load-bearing rigid frame lets you use glass, brick or other materials to create decorative walls at low cost.

If you want to start more simply, Butler all-metal buildings provide excellent warehousing, big capacity grain storage or feed mixing facilities. The wide, clear-span interiors permit maximum flexibility in planning interior space. And there are no overhead trusses to interfere with stacking merchandise or conveying and mixing equipment.

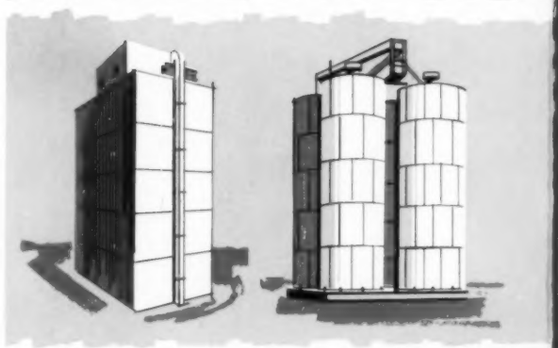


Butler Giant Bins and Stor-O-Matic Tanks—Butler Giant bins are the perfect, low-cost answer for annex storage. Available in capacities from 3,600 to 36,390 bushels, they make it easy for you to separate different types and grades of grain. You get weathertight, firesafe storage at lowest cost per bushel.

Stor-O-Matic tanks are real working bins. The hopper bottom can be equipped with a discharge auger for fast, economical grain unloading. Available in capacities from 5,845 to 9,242 bushels, Stor-O-Matic tanks are a perfect way to provide self-unloading storage facilities.

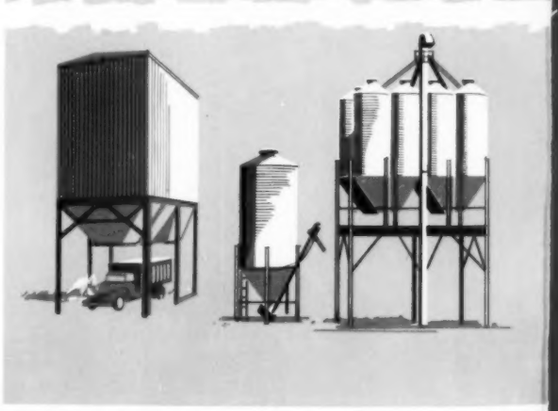
Butler Round or Square Bolted Tanks—Butler bolted steel tanks offer the finest, most dependable vertical storage for grain or feed. Round tanks are available in many diameters, heights and capacities up to 123,365 bushels. Firesafe, all-metal construction keeps insurance and maintenance costs down. Expansion is fast and economical.

The new Butler square bolted tanks provide maximum storage capacity in a minimum of space. Individual tanks fit flush with their neighbors or with existing walls. Easily compartmented, they are ideal for handling feed and feed ingredients.



Butler Bulk-O-Matic® and Square Bins—Butler Bulk-O-Matic tanks provide ideal storage for small to medium quantities of finished feeds or feed ingredients. The new, exclusive Live-Bottom Hopper with internal auger assures fast, positive clean-out of even difficult-to-handle ingredients. Capacities from 2 to 87 tons. Square tanks in the new space saving shape make excellent over-the-drive load-out or receiving facilities. A complete package including structurals, hoppers, tanks and roof deck is available for fast, economical erection in capacities from 1 to 50 tons.

Augers, elevators, belt and screw conveyors are available to complete Butler tanks and bins into efficient, push-button controlled facilities.



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Disease-Free Cattle Moved to New USDA Lab Located in Iowa

WASHINGTON—A herd of breeding cattle, which has been maintained free of disease for more than 20 years, has been shipped from Beltsville, Md., to the new National Animal Disease Laboratory at Ames, Iowa, to provide a source of healthy animals for research, the U.S. Department of Agriculture reports.

In all, 117 cattle were being shipped from USDA's Agricultural Research Center at Beltsville in eight specially designed railroad cars. Adequate ventilation with filtered air was provided in the cars to maintain health of the animals, and air conditioning was included to minimize stress during the 27-hour trip. In addition, the cars were thoroughly cleaned and disinfected to prevent any possible infection of the cattle by either disease organisms or parasites.

The cattle were fed and watered en route. To insure the safety and health of the animals, they were accompanied by a USDA veterinarian and several caretakers. The animals will be held temporarily at Ames in quarantine pens. Eventually they will be used to breed disease-free animals for disease studies.

The first shipment of animals to the new USDA laboratory was 2,500 guinea pigs from stocks that have been maintained disease-free at Beltsville for more than 30 years. This shipment arrived at Ames recently. The guinea pigs were transported in three air-conditioned, temperature-controlled trucks and accompanied by veterinarians and a supervisor to insure their health and safety.

Other disease-free animals moved by truck to Ames, according to Dr. Chester A. Manthei, assistant director for research at the new laboratory, include 500 chickens and 60 rabbits. A breeding herd of 25 hogs will be moved soon. All these animals are from groups maintained at Beltsville for many years to supply research subjects of known pedigree and health for livestock disease research.

Scientific Personnel

Scientific personnel from Beltsville assigned to the new research station will move as facilities at the new laboratory become ready for use. Special laboratory equipment, files and a library are also being moved so that the laboratory can begin operations by July 1.

This $16 million National Animal Disease Laboratory, authorized by Congress in 1956, is located on a 318-acre tract of land just north of Ames. It consists of seven major buildings and 25 field buildings. The administration building is 45 by 326 ft. The main laboratory building is 448 by 326 feet. Each of the two large animal laboratories is 267 by 216 feet.

Buildings of the infectious disease compound cover an area equal in size to five city blocks.

The laboratory has been designed for maximum safety to personnel and to eliminate any hazard of cross-contamination of research projects. The main laboratory buildings are fully air conditioned. Air flow is controlled and sewage decontaminated before leaving the premises.

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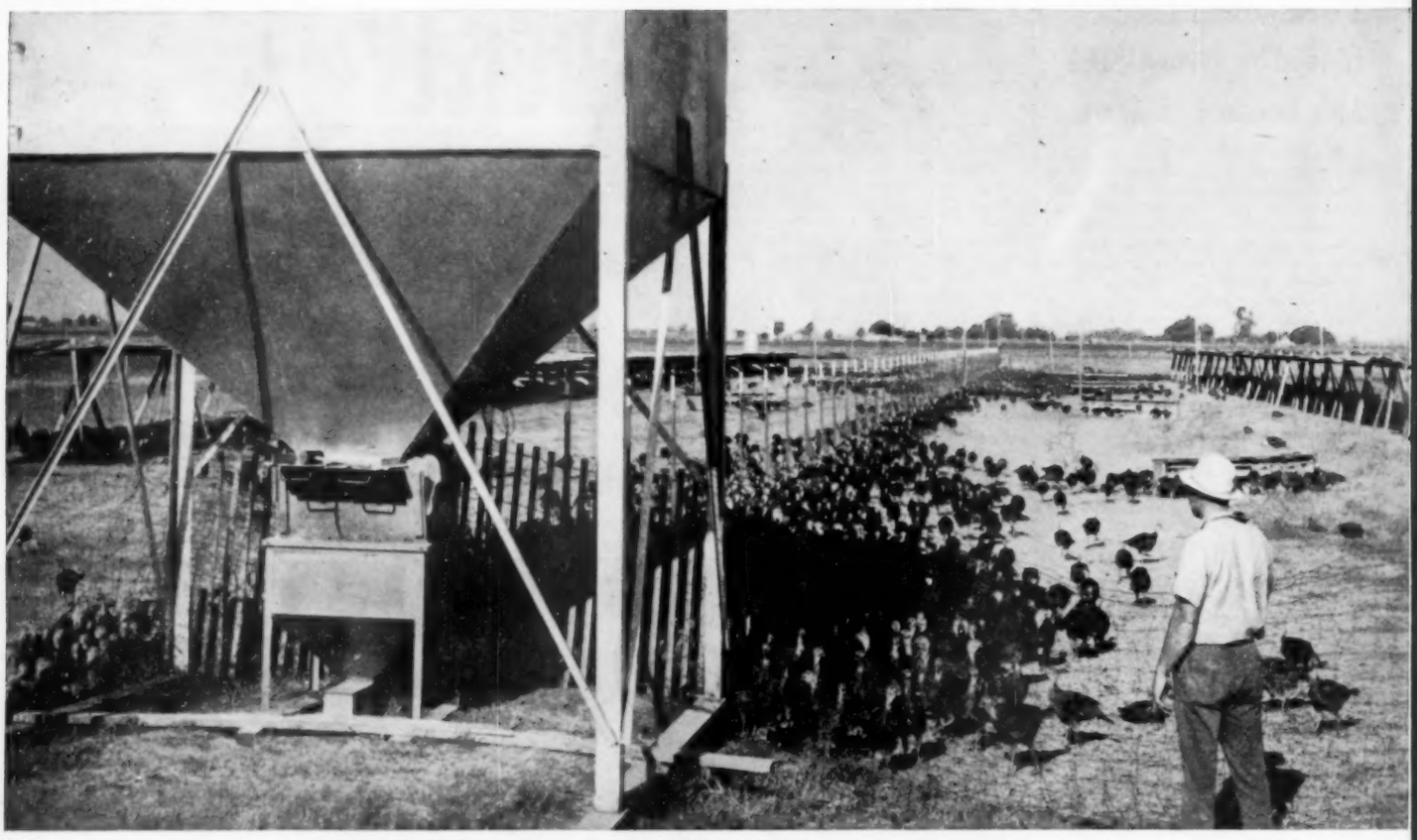

Elwood Swanson, Turlock, Calif., feeds nf-180 to 150,000 market turkeys with "excellent results."

Protect your interest in turkey contracts from start to finish

REPORT ON nf-180 PROTECTIVE FEEDING FOR MEAT BIRDS

If you're financing turkeys, you have an important stake in those birds until they reach the processor. And many things can threaten your interest. Subclinical infections, for example, can be a constant drag on performance. And there is always the chance of a disease outbreak. If a disease outbreak should occur, your customer is in for serious losses from stunting and reduced feed efficiency . . . even if he manages to treat in time to hold down mortality. With nf-180 protective feeding, you protect your customers (and your financial interest) against severe losses. This report tells how.

KEITH LANGMO, a Paynesville, Minn., feed dealer (he's pictured on the opposite page) says: "Without any question, nf-180 is the best single drug for turkeys . . . and it saves a few ulcers for me, too."

The reason nf-180 saves ulcers for Keith Langmo is because it *protects his investment in financing turkeys.* It reduces his risk . . . increases his peace-of-mind. As Keith Langmo says, "When you get disease in a house, you run the risk of it spreading throughout the whole flock. Any time you can do anything within economic reality to reduce that disease problem, you're doing something real good. Many times we'd take a real licking if we didn't have it."

In addition to reducing risk, nf-180 protective feeding makes for happy customers by *improving feed performance.* It reduces early mortality, gets birds off to a faster start, improves feed efficiency.

The principle behind nf-180 protective feeding is this: nf-180 prevents and controls an extremely wide range of turkey diseases — more turkey diseases, in fact, than any other drug. It protects against typhoid, pullorum, paracolon, paratyphoid, C.R.D., blue comb, hexamitiasis, synovitis, ulcerative enteritis and blackhead.

In addition, nf-180 cleans out the intestinal tract . . . clears up the many hidden stresses and subclinical infections that hold everyday feed performance down. It prevents constant disease drag from building up and triggering serious troubles. In most cases, a regular nf-180 protective feeding program costs your customers far less than treating troubles as they occur. You'll benefit, too, with fewer service calls and fewer complaints.

Here's what to do: Add nf-180 to your starting mash at a rate to provide 100 grams furazolidone per ton of total ration. Recommend this nf-180 fortified ration throughout the starting period — including the first week on range.

Then, it is equally important to see that nf-180 protection is continued during the growing-finishing period . . . because if you are financing turkeys, that's when you have considerable money tied up in feed.

During this period, though, we don't feel we can make a specific feeding recommendation covering all situations. The need for nf-180 protection varies from farm to farm and area to area. You can recommend an nf-180 protective program to fit the individual feeder, based on local past history and disease problems. Here are 3 programs that are used successfully by many feed men.

• Where blackhead, hexamitiasis, paracolon, and paratyphoid are problems, a 2-lb-per-ton level of nf-180 (100 grams furazolidone) fed continuously gives dependable results.

• Where blackhead, hexamitiasis, paracolon and paratyphoid are not likely problems, a 1-lb. level of nf-180 (50 grams furazolidone) protects against stress setbacks and a wide range of other diseases.

• Where disease is not a constant threat, growers report good results using the nf-180 week-a-month plan. A ration containing 2 lbs. of nf-180 (100 grams furazolidone) — fed 1 week out of 4 — cleans up birds, fights stresses, knocks out disease organisms before they can build up and cause trouble.

When your servicemen are called out to farms to check on flock troubles, nf-180 should be the first drug they turn to if they suspect something is wrong. nf-180's wide-range effectiveness stands the best chance of stopping the trouble. Even when the major problem is diagnosed, it is important to remember that diseases seldom attack singly. nf-180 — in addition to stopping the primary trouble — is also effective against a host of secondary problems.

The best way to predict how your customers will like nf-180 protective feeding is

John Ash's son, Bob, was this year's Reserve Sweepstakes winner at the National Dressed Turkey show.

to see what present users say about it. In these excerpts from tape-recorded interviews, nf-180 users answer some common questions about protective feeding:

How do you use nf-180 for best results?

WALTER SCHWEDLER, Portland, Oregon, hatcheryman, uses the following nf-180 program for the 65,000 birds he grows out himself . . . and also recommends it to his poult customers: "The first 10 days, we start poults on a prestarter containing a 2-lb. level of nf-180. Then we go to a 1-lb. level through the rest of the 7 to 8-week starter period, making sure we leave the nf-180 in until the birds settle down on range. After that, we use a periodic once-a-month feeding."

JOHN ASH, Ashkum, Ill., is a 25-year veteran in the turkey business. He says: "It is absolutely essential that our starter feed contain nf-180. We feed the 2-lb. level continuously for the first 8 weeks. After that, we feel you can delete it for short periods if you're careful to observe the birds and conditions. If you see trouble approaching, get nf-180 back in there again."

Does nf-180 live up to its claims?

ELWOOD SWANSON, owner of Westlock Turkey Breeding Farms, Turlock, Calif., grows out 150,000 turkeys a year in addition to raising 12,000 to 16,000 breeders. He replies: "nf-180 works! It must work, because we're getting excellent turkeys. I feel nf-180 is doing a real swell job for us."

DON AND JERRY WHARTON, partners in a Sacramento, Calif., turkey hatchery, recall: "One of your representatives told us about nf-180. He said it was something that was going to help all of us. At the time, we thought it was just salesmen's enthusiasm. But the following year we tried it on a small scale. It was so effective we now recommend nf-180 to all our customers. I'd say 90% of the 1,200,000 poults we put out are started on nf-180."

What specific benefits have you noticed from nf-180?

KEITH LANGMO, who you met on the opposite page, says: "nf-180 keeps birds in condition. It helps them build up resistance. It makes the bird stronger. Keeps the bird healthy. Keeps the intestinal walls in condition so the birds can absorb the nutrients."

How does nf-180 compare with other drugs?

PAUL BANDEL, Rochester, Minn., has raised 4,000-5,000 turkeys a year for 31 years. He says: "There are many good drugs, but I would definitely say nf-180 is one of the very top products put out to help turkeys."

KEITH LANGMO adds: "I would say that, without any question, nf-180 is the best single drug for turkeys. If I had to pick the one drug that did the most for our operation, I'd pick nf-180."

Hatcherymen Don and Jerry Wharton report 90% of their customers start their poults on nf-180.

How do you feel about the cost of nf-180?

DON AND JERRY WHARTON: "Why, compared to what a fella could lose, the cost of nf-180 is nil. It's just nothing!"

Keith Langmo says: "nf-180 keeps the birds in condition . . . and it saves a few ulcers for me, too."

PAUL BANDEL agrees. He says: "Some people ask, 'Why do you use nf-180? That costs money.' Well, I say, 'nf-180 has paid off in dollars and cents.' I have to foot the bills, and I'm convinced nf-180 does pay and pay good!"

How would you like to raise turkeys without nf-180?

KEITH LANGMO: "I wouldn't like to. I imagine I could, but it would make our job more difficult. nf-180 is one of the things that make your job a little easier."

PAUL BANDEL: "I'd hate to raise turkeys without it! I feel more relaxed . . . less helpless with nf-180 in my feed."

Get in touch with your Hess & Clark salesman. He can answer any questions you may have . . . and can get you started on an nf-180 protective feeding program.

These informative selling aids help acquaint customers with nf-180 protective feeding

By starting an nf-180 protective feeding program now, you'll profit from powerful selling support. The 4-page folder shown here is currently running as an insert in leading turkey magazines. It also makes an informative handout piece for your store. The nf-180 Profit Pointer dial enables you and your customers to quickly dial the correct nf-180 level for treating specific diseases.

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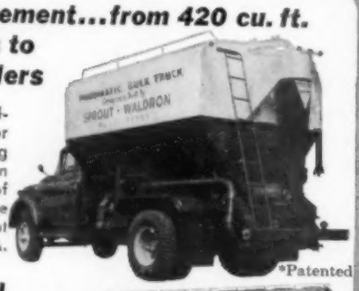

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Sale of Medicants by Feed Dealers Legalized

TORONTO, ONT.—Regulations to the Ontario Pharmacy Act have passed which permit feed and farm supply dealers to sell medicants to owners of livestock for the treatment or prevention of diseases of livestock, the Ontario Retail Feed Dealers Assn. points out.

The term "livestock" embraces all classes of farm animals, including poultry. As a result of the broad interpretation given to the word "livestock," as written into the regulations, the order which originally served to cover sale of poultry medicants has been revoked.

The regulation was declared effectice May 26, and legalizes sales of animal and poultry medicants by feed and farm dealers as per date of enactment. Despite the fact that no official ruling can be obtained regarding disposition of lawsuits pending, it is assumed that charges of unlawful sale of animal health products will now be withdrawn.

As applied in the previous order covering sale of poultry medicants, it is the responsibility of the dealer to determine that the purchaser is an owner or an agent of an owner of livestock. It is also stipulated that the seller shall have knowledge of the purpose for which the medicants are to be used, although responsibility for the proper administration rests with the owner of the livestock deemed to be in need of treatment.

Dealers are advised that every possible precaution against misuse and improper application should be taken.

"Our position in pressing for the right to sell animal health products was materially strengthened by the fact that no untoward incident developed through feed dealer sales of poultry medicants," the association said. "It will be in the interest of all to see that this record is maintained, as advantage is taken of this recent liberalization of the Ontario Pharmacy Act."

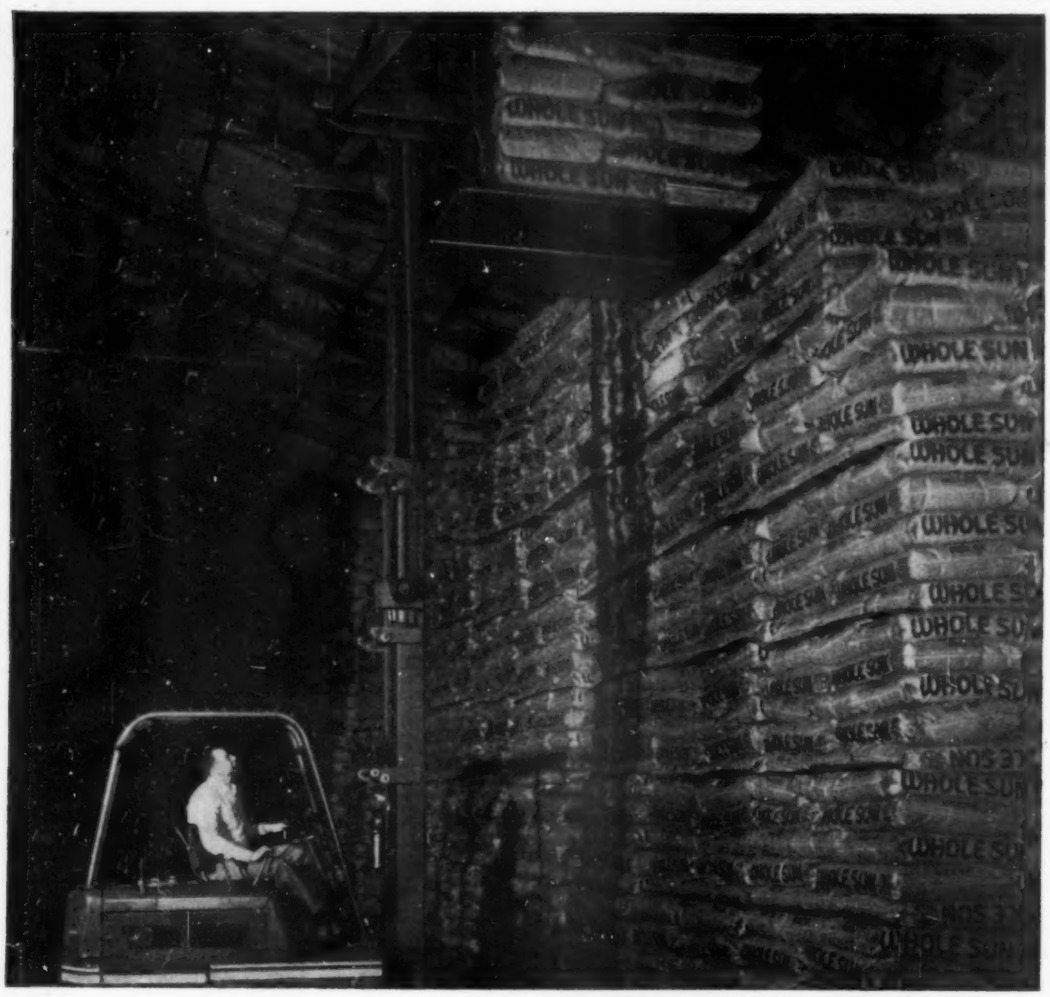
A copy of the official order follows:

Regulations

1. (1) Subject to regulation 2, the following drugs referred to in schedule C of the act are designated as drugs that may be sold by a person, not otherwise authorized under the act, to owners of livestock for the treatment of livestock:
   (a) Aureomycin and any salt or derivative thereof;
   (b) Dihydrostreptomycin and any compound thereof;
   (c) Penicillin, its salts and derivatives, or preparations thereof;
   (d) Streptomycin, and any compound thereof;
   (e) Sulphonamides and any salt, homologue or derivate thereof; and
   (f) Terramycin and any compound thereof.
   (2) A drug designated in subregulation 1 may be sold without prescription to owners of livestock for the treatment of livestock.
2. No person who is not otherwise authorized under the act shall sell a drug designated in subregulation 1 of regulation 1 unless the drug is:
   (a) sold to the owner of livestock for the purpose of treating the livestock;
   (b) in a form not suitable for human use; and
   (c) combined with a substance other than a substance referred to in subregulation 1 of regulation 1.
3. Ontario Regulations 26/58 are revoked.

Distributor Named

CEDAR RAPIDS, IOWA—Schweiger's, Inc., Watertown, S.D., is a new distributor for Highway Equipment Co., Cedar Rapids. The new distributor will handle New Leader and Challenger spreaders, New Leader blenders, and Model "C" bulk material haulers. Schweiger's, Inc., serves South Dakota and part of Minnesota.



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MORE CATTLE FEEDING IN ARIZONA

TUCSON, ARIZ.—Growth and importance of the cattle feeding industry in Arizona were pointed out at Arizona Cattle Feeders Day at the University of Arizona. Dr. Ray Seltzer, resigning head of the university's agricultural economics department, noted for one thing that last year, 457,000 head of cattle were sold out of Arizona feedlots for more than $100 million. Because of the mild climate, skilled feeders, adequate supplies of feeds and rapid population growth in the region, Dr. Seltzer looks for continued growth of cattle feeding.

While numbers of cattle on feed in the state are increasing, beef cow numbers are declining, meaning that it may become necessary to look to other areas for feeder cattle in the future.

The size of feedlot operations is increasing. An average commercial feedlot will have a capacity of about 2,000 head, an investment per lot of $100,000 in land and facilities and a cattle inventory of more than $200,000.

Last year Arizona had 205 feedlots with a total capacity of 320,000 head, for an average of nearly 1,600 head. A comparable average five years ago was 1,300 head.

The economist foresees that by 1975, the West will have to slaughter an additional 2 million head of cattle to meet the increased need for beef.

Oregon Housewives Favor Local Fryers Over Imported Birds

SALEM, ORE. — Effectiveness of the Oregon Fryer Commission in assisting to keep fryers on the move, particularly in the face of over-production, was expressed by the Processors Inter-Industry Council at a recent dinner meeting here.

Emphasis was placed on the importance of the fryer commission's maintaining a positive and consistent promotional program to remind housewives of Oregon fryers.

Dr. H. F. Hollands, agricultural economist, Oregon State University, in charge of a fryer study being made at the university, and Hoy Carmen, graduate student at OSU, who conducted a survey of housewives, made reports at the meeting.

Of the 520 housewives interviewed in the survey, 40% now serve chicken once or more a week, and only 14% serve it less than once a month. Also, 53% looked for the Oregon label and 47% said that they were willing to pay 2¢ more per pound for an Oregon grown bird than for one from out of state. Fifty seven per cent of the purchasers objected to additives such as preservatives on poultry brought in from other states.

Steve Brody, manager of the Oregon Fryer Commission, reported on the commission's meeting held prior to the industry council session.

For the first time in the history of commodity commissions this commission turned over to the industry specific services. The board approved $600 for a pilot program for a full-time merchandising man to work with Mr. Brody.

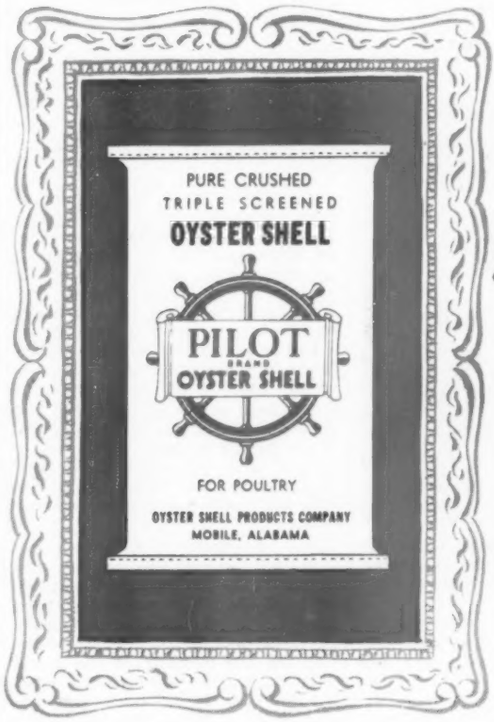
A budget of $60,000 for the commission was approved unanimously. Dr. Hollands will continue work in research for the commission. The group also agreed to ask the Oregon State Department of Agriculture to run a "spot" audit on processors' books similar to that being carried on in the dairy industry. The commission also voted to maintain a booth at the Oregon State Fair.

Work will continue on research toward the proposed Fryer Book, so that it will completely meet educational standards. The commission hopes to have the book distributed in schools and in home economics departments by 1962.

Howard Boone Heads Frisco Exchange

SAN FRANCISCO — Howard D. Boone, Cargill, Inc., has been elected president of the San Francisco Grain Exchange. Latham H. Allen, W. H. Allen Co., is the new vice president and Ed W. Huebner is manager.

Directors elected include E. A. Silverfield, Continental Grain Co.; R. H. Wilson, Wilson & Boody, and Blair Erigens, The Pillsbury Co.



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Some Observations on:

European Swine Production

"European swine centers visited were characterized by excellent management, a high quality product, a concentrated system centered around concrete and good housing and the pride and confidence that come from a job well done."

By Dr. J. E. Burnside
Southern Illinois University

Joseph E. Burnside

AUTHOR—Dr. Burnside, professor in the department of animal industries, School of Agriculture, Southern Illinois University, Carbondale, Ill., is a native of Tampa, Fla. He joined Southern's faculty in 1955 after three years of service as a livestock toxicologist at the Georgia Coastal Plain Experiment Station, Tifton, Ga.

Dr. Burnside received his master's degree from the University of Florida in 1950 and earned his doctorate in animal nutrition and biochemistry from the University of Wisconsin in 1952.

In addition to his teaching duties at Southern, Dr. Burnside has carried on extensive swine management research on the growing and finishing of hogs in confined quarters, has written articles for various publications and has spoken to many farm groups on swine production problems.

Nineteen days in Europe observing various swine operations certainly does not qualify one as an expert on European swine production. However, it does leave one with certain impressions and ideas about swine production by our neighbors on the continent. It also seems only fair to point out that the various places visited in Germany, Denmark, Sweden, England and Ireland were not considered as average production centers, but were among the best and had the most to offer from an instructional standpoint. Several of the research institutions were also visited in these countries and the various projects and results reviewed.

All of the places visited received our group most cordially and one might also say "with open arms." If American prestige is suffering overseas it was not at all apparent from the contacts the author made. It seemed that a genuine interest in swine production problems in general acted as a common denominator for all concerned. Furthermore, it appeared certain that the U.S. does not have a monopoly on large pork producing centers, nor do we have a monopoly on smart producers who have plenty of ideas that promote efficient production of quality pork.

Difference in Feedstuffs

It should be pointed out to those of you who have forgotten, that the European hog consumes large quantities of small grains, milk by-products such as whey and skim milk, as well as other dairy by-products and tuber crops such as sugar beets and potatoes. Corn and soybean oil meal are fed rather sparingly.

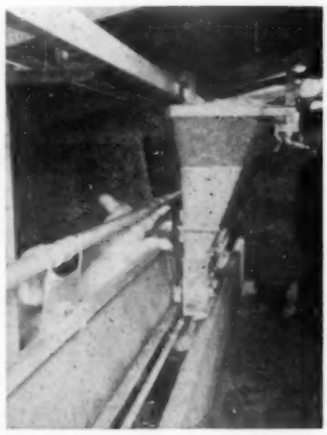

FIGURE 1—McMaster's automatic limit portion liquid feeding mechanism at the Richwood farm in England.

Due to this difference in feedstuffs, in some cases feed efficiency and rate of gain figures are a little difficult to equilibrate. You will also recall that most of the hogs are sold on the rail and payment is based on carcass grade. The grading system accentuates quality and quite naturally top quality carcasses bring the highest price. Attention is directed to Table 1 for a comparison of the first five bacon grades (Wiltshire sides) with our meat type hog certification standards and U.S. Department of Agriculture carcass grades.

The first and most lasting impressions that one gains from the places visited is the magnitude of the various operations, the systematic management and the constant striving to produce a top quality product. The emphasis did not seem to be so much on rate of gain and feed efficiency as it was on quality, although the importance of these first two items was readily admitted and appreciated.

One must emphasize again the importance attached to the production of a quality product. This almost seemed to be an obsession and perhaps rightly so. Producers in the U.S. could take a strong lesson from this.

Concrete and Silage

It was rather amazing for the author to see an operation consisting of 2,000 sows* built around a strict confinement system where the entire operation was on concrete, was hand fed and the majority of the waste material disposed of by using a liquid manure disposal system in conjunction with a pipe-irrigation system. This disposal system in itself was a marvel in planning.

To top this off was the practice of feeding silage to growing-finishing swine. On one farm the silage supply consisted of eight concrete silos holding 360 tons each and four plastic-lined wooden pit silos holding 200 tons each. This amazing hog enterprise was part of the Heinrich Biehl operation just outside Hamburg, Germany.

The silage fed to the growing-finishing animals, i.e., 90 to 240 lb., consisted of sugar beets with tops, potatoes (cooked by steam), rye grass and either wheat and/or barley. A 90-lb. hog was started on about 7 lb. of this silage and finished out at 240 lb. on 15 lb. of the mixture. An appropriate amount of Mr. Biehl's silage supplement was added to balance the ration. Feeding was three times a day on a slightly restricted feeding regime.

If you're having trouble visualizing this, consider the other amazing part of this silage feeding operation: 22,500 hogs per year were fed on this program alone.

This was one of the two swine operations run by Mr. Biehl and his feed company. Our swine producers feed lots of silage to gestating animals but who among us finishes out hogs on silage? The carcasses from this silage feeding operation were running around 1¼-1½ in. of back fat with a chilled dressing per cent of 80-82% with head intact.

Limit Portion Feeding

It was very enlightening to observe the almost universal practice of limit portion feeding among all the places visited. Most of this limit feeding was done by hand but in several places it was mechanized. For the most part the growing-finishing hogs were fed twice daily, but on the Richwood farm in England the growing-finishing hogs were fed four times per day with an automatic mechanism that mixed the water and feed as it was fed in a trough. The result was automatic limit-portion liquid feeding with a feed conversion of 2.5-2.75 from 60 to 200 lb.

Figure 1 shows part of the feeding mechanism. The spike-like projections on the left side of the feed trough engage the metering device at the bottom of the feed hopper. As

*An increase to 2,500 by Jan. 1, 1961, was anticipated.

TABLE 1. Carcass Evaluating Systems

Bacon Grading Standards (Wiltshire sides)	Grade	Maximum Back Fat, Inches: Loin[1]	Shoulder[2]	Carcass Length, Inches[3]
First five grades Carcass Wt. 140-165 lb. inclusive	AA+	1.2	2	31.7 (Min.)
	AA	1.2	2	30.5 (Min.)
	A	1.2	2	30.5 (Below)
	B+	1.4	2.1	30.5 (Min.)
	B	1.4	2.1	30.5 (Below)

USDA Carcass Grades	Carcass Wt.[4] or Carcass Length, Pounds and Inches	Average Back Fat Thickness, Inches[5]: U.S. 1	U.S. 2	U.S. 3	Med.	Cull
	Under 120 lb. or under 27 in.	1.2-1.5	1.5-1.8	1.8+	0.9-1.2	less than 0.9
	120-164 lb. or 27 to 29.9 in.	1.3-1.6	1.6-1.9	1.9+	1.0-1.3	less than 1.0
	165 to 209 lb. or 30 to 32.9 in.	1.4-1.7	1.7-2.0	2.0+	1.1-1.4	less than 1.1
	210 or more lb. or 33 or more in.	1.5-1.8	1.8-2.1	2.1+	1.2-1.5	less than 1.2

Meat Type Hog Certification Standards	Wt. at Slaughter, lb. (Min.)	Sq. in. Loin Eye[6] (Min.)	Back Fat[2] (Min.)	Carcass Length,[3] in. (Min.)
	180	4	1.6	29

[1]Point of maximum thickness on loin between last rib and tail.
[2]Point of maximum fat thickness on shoulder.
[3]Average of measurements made opposite first and last ribs and last lumbar vertebra.
[4]Carcass weight based on packer style dress.
[5]Taken between 10th and 11th rib.
[6]Front of first rib to front of aitch bone.

TABLE 2. Effect of Limit Feeding on Carcass Quality, Production Efficiency

Treatment	FF*	80% FF	70% FF
Final weight, lb.	199	183	168
Average daily gain, lb.	1.4	1.3	1.1
Feed per cwt. gain, lb.	441	389	399
Back fat, inches	1.5	1.3	1.3
Feed per pound lean cuts, lb.	8.0	6.5	6.4
Loin eye, square inches	4.4	4.8	4.7

*FF is full feeding.

EDITOR'S NOTE: ***Although the U.S. is aware of some of the unique swine production ideas which have been proved successful in Europe, many of them, in reality, still are "new" to this country in that so far they have met with only limited acceptance for a variety of reasons. Because the feed industry is an integral segment of animal agriculture it is important that its representatives acquire knowledge of these European practices in anticipation of the possibility of their further utilization in the U.S.***

The author of this article, one of 41 persons from the U.S. who visited 13 swine production centers and 5 research centers in Europe last November, describes in detail European applications of strict confinement hog operations, the "hothouse" system of finishing pigs, limit portion feeding, liquid feeding, hand feeding, liquid and solid manure disposal and other swine production and management variations.

The tour in which Dr. Burnside participated was organized and arranged by the staff of Hogcast, a monthly business letter published by Farm Journal, Inc., and conducted by its editor, Dean Wolf.

Dr. Burnside notes that the production centers visited were "certainly the most interesting and unique in their respective countries, and perhaps in the entire world." His article discusses some of the more salient observations made during the tour.

FIGURE 2—System of connected manure gutters at Bernerup swine farm in Sweden. Main gutter connects all laterals from various barns.

the hopper moves along the overhead track the correct amount of feed is placed in the trough for each pen of pigs. Water is added to the feed as the hopper moves along the track and triggers the toggle valve on the supply pipe (middle foreground). The water is then discharged from the bottom pipe through a series of holes and liquefies the feed. The valve can be hand-actuated if more water is needed.

Increased Feed Efficiency

This practice of limit portion feeding was correlated with an increased feed efficiency of from 12-25%. In addition to this was the added advantage of enhancing carcass quality.

Limit portion feeding is, of course, not a new idea in our country, but it has not been practical because of the high cost of labor coupled with the fact that our equipment manufacturers have not seen fit to produce an automatic limit portion feeder as yet.

Although it is not the intent of this paper to review limit portion feeding, it is common knowledge that several of our research institutions have done work on this type of feeding with favorable results.

Attention is directed to Table 2 where a recent trial by the Maryland group is summarized. Would you settle for a tenth of a pound decrease in daily gain, if at the same time you could get an increase in feed efficiency of 52 lb., a decrease in back fat of 0.2 in., an increase in loin eye of 0.4 of a square inch and a decrease in the amount of feed needed to produce a pound of lean by 1½ lb.?

Perhaps full feeding and the self feeder have become so traditional in our system of hog production that our equipment manufacturers have become "conventionalized." Observations from this trip and the experience of the author suggest that we should be investigating this type of a growing-finishing feeding regime, but fast.

It should be pointed out that our European friends are utilizing growing-finishing pens designed to hold about 20 pigs at the maximum. This has two main advantages: Uniformity of pigs per pen and utilization of trough space so that all pigs can eat at the same time. The latter is necessary if one is using limit portion feeding.

This type of system calls for some fresh thinking regarding building and equipment design. Such a system should certainly pay off for our swine producers. The facts already tend to point in this direction.

Frequency of Feeding

One point that the European producers could not settle on was the correct frequency of limit portion feeding. Should it be two, three or four times a day or even more? One of the English producers, Mr. Richwood, feeds four times a day: 7:30 and 11:30 a.m. and 3:30 and 7:30 p.m. One thing that they do agree on, however, is that intermittent limit portion feeding keeps the pig a little hungry so that it can do justice to the feed when it is finally fed.

The final touch to limit portion feeding was added in Sweden by Mr. Bernerup. He purchases feeder pigs at around 60 lb. and finishes them out at 220 lb. His average feed conversion on these purchased feeder pigs is about 3.5 with a death loss of about 2%.

The surprising thing about this operation is that the dry feed is moved 600 ft. through underground pipes by air pressure from the feed house to the pig barn mixing tanks. Here it is mixed in a ratio by weight of 2 parts water to 1 of feed before feeding to the pigs.

This liquid feeding barn holds 2,000 animals which are fed twice a day. The building is four pens wide with a catwalk above each pen for observation and for access to the valve through which the liquefied feed is delivered into two 9-in. glazed tile troughs that run the length of the building interrupted only by the pen divisions.

It takes the herdsmen two hours a day to feed the entire barnful of pigs. A very clever pen arrangement system makes for easy cleaning. The dunging alley doors are closed, confining the pigs to the main pen. The dunging alleys in all the buildings

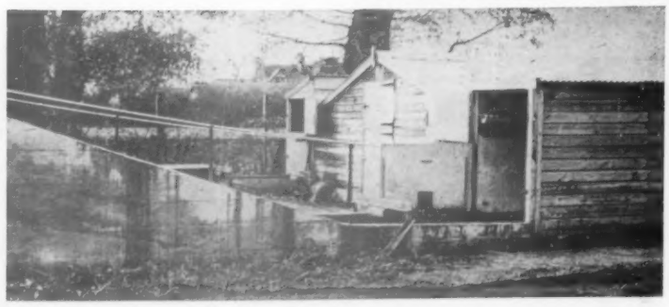

FIGURE 4—Outside-inside dunging alleys and cleaning mechanism at Richwood farm in England.

are then cleaned by means of a small tractor and blade. The waste material is pushed into a large gutter which connects all the pig barns much like a sewage line connects all the houses on a street (see Figure 2). The large gutter is then cleaned by a scraper blade pulled by an electric powered cable and finally terminates in a large manure pile. From here manure is applied to the land as needed. In this system, all waste material, including the straw used for bedding, is handled as a solid.

The floor plan of this liquid feeding barn is so interesting it is partially produced for readers' information in Figure 3.

Comparisons

Irrespective of the liquid feeding feature, this type of floor plan would work well for some of our large operations. Aside from the mechanisms involved, the main difference between the liquid feeding setup of Mr. Bernerup and Mr. Richwood is that in the latter the feed and water are delivered to the feeding trough separately but simultaneously with the jets of water doing the mixing. This type of arrangement would certainly eliminate trouble from moldy liquid feed. Although this was not mentioned as a problem in the Swedish system, it no doubt could be a problem as some of the molds that grow in and on feed are about as toxic as arsenic. Limit portion liquid feeding also lends itself very handily to water medication.

Mr. Biehl of Germany reported that his records showed a 10-15% feed saving by liquefying feed rather than feeding it dry. The liquefying mechanism on one of their farms was simply a perforated water pipe that ran the length of the feed trough. When the herdsman put feed in the trough he turned on the water valve and mixed the feed and water with a T-shaped metal rod.

This type of feeding arrangement made it necessary for the front pen panels to be hinged so the pigs could be shut off from the trough while preparing the feed. Attention is again called to the fact that this type of system calls for a coordination of pen size, trough space and pig numbers so that all pigs may have access to the feed simultaneously.

Dunging Separate

Another interesting aspect of European swine management is the careful attention that is given to pen arrangement relative to dunging. Instead of having a large pen in which 40 to 60 pigs eat, sleep and dung in frustrated confusion, the spatial arrangement was such that the dunging alley might be considered a separate part of the pen.

The basic designs of such a system centered around three plans.

One has already been mentioned (Figure 3). The other basic type is actually an "outside-inside" dunging

(Turn to page 44)

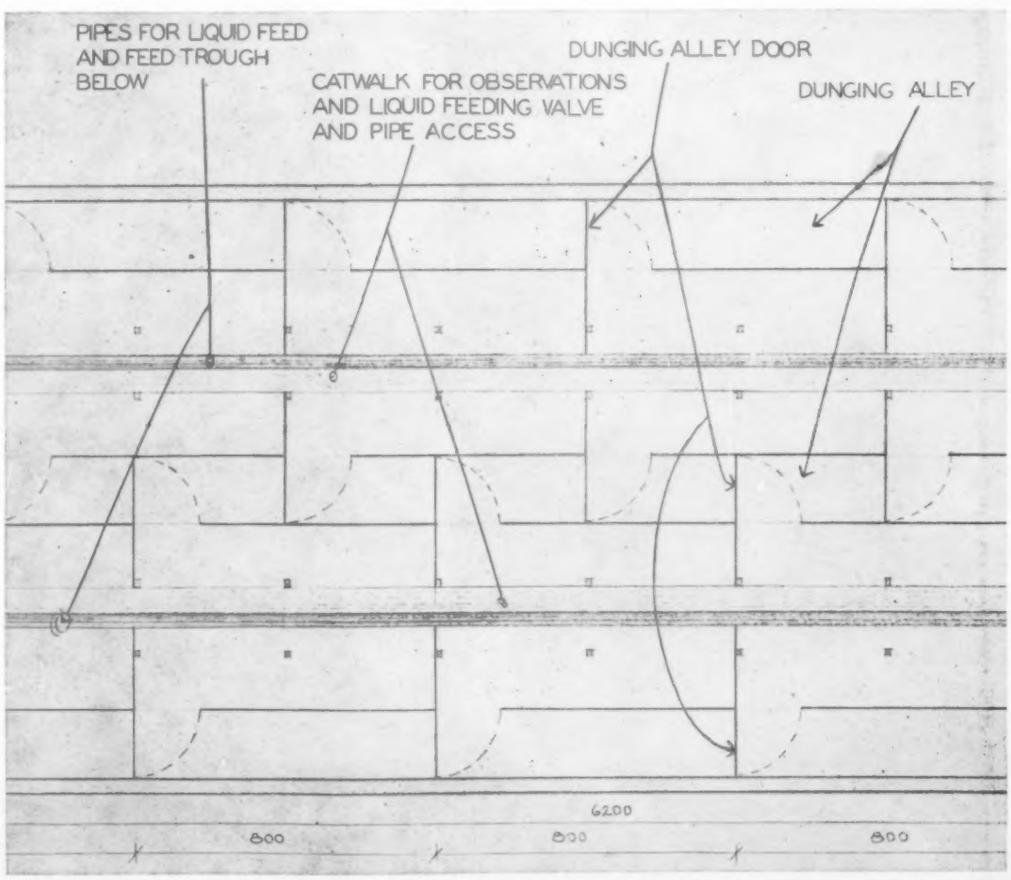

FIGURE 3—Floor plan of finishing barn devoted exclusively to automatic liquid feeding on Bernerup farm in Sweden.

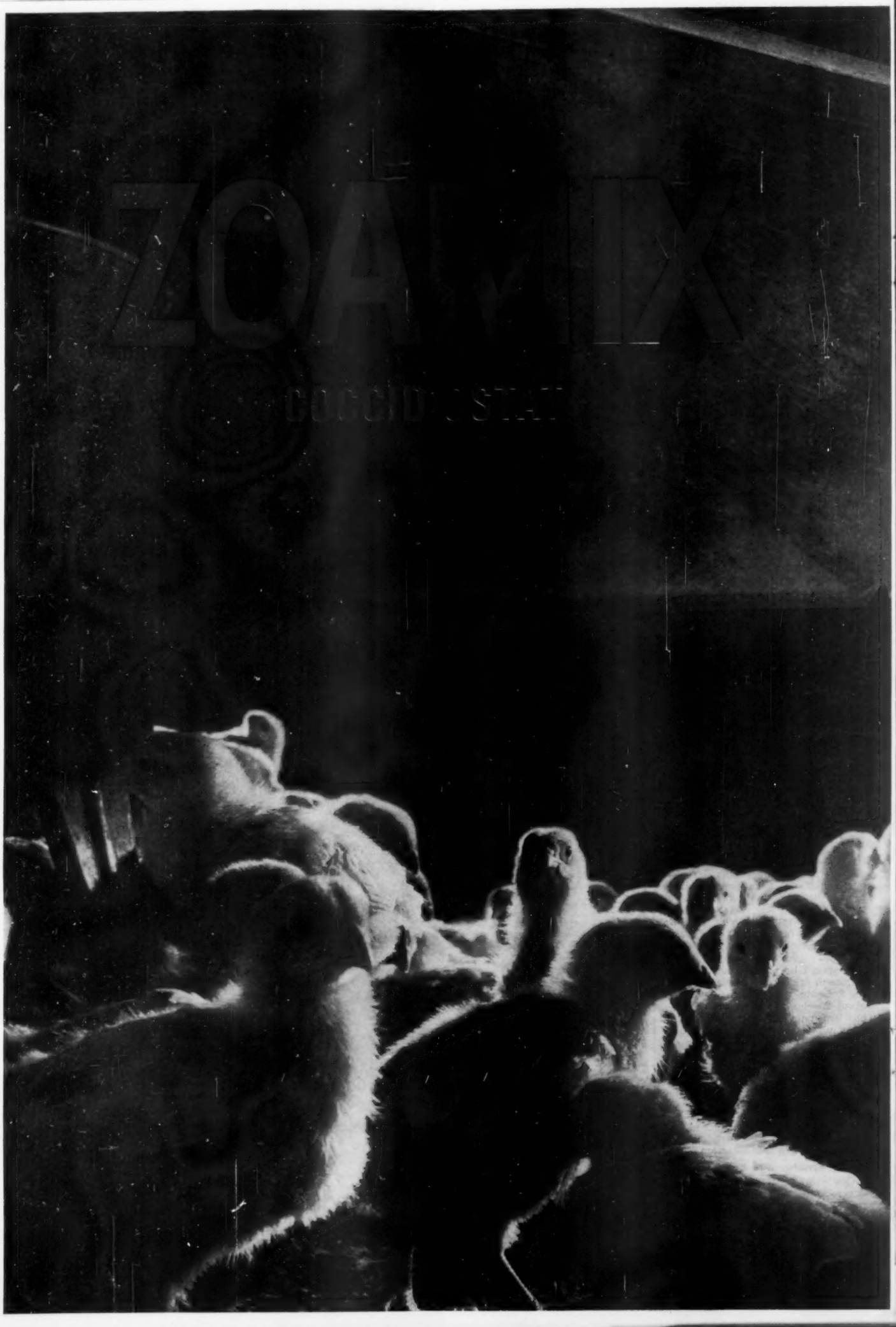
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TABLE 3. Effects of Varying Amounts of Floor Space on Growing-Finishing Swine in Total Confinement

Combined Summary of Three Trials

Treatment, Sq. Ft. Per Pig	15	13	11	9	7
Number of pigs	27	27	27	27	27
Average initial weight, lb.	53.8	55.3	54.4	54.8	55.4
Average final weight, lb.	208.6	209.8	208.5	210.2	208.6
Average daily gain, lb.	1.71	1.68	1.60	1.64	1.66
Feed per pound gain, lb.	3.70	3.63	3.72	3.60	3.60

No significant differences in any of the three trials.

TABLE 4. Effects of Varying Amounts of Floor Space on Growing-Finishing Swine in Total Confinement

Combined Summary of Average Daily Gain in Pounds. Each Trial Consisted of Nine Pigs Per Treatment

Treatment	1	2	3	4	5
Square Feet Per Pig	13	7	6	5	4
Trial 1	1.74*	1.65*	1.69*	1.52*	1.26
Trial 2	1.54*,†	1.47*,‡	1.47*,‡	1.27	1.17
Trial 3	---	1.40*	1.36*	1.33*	1.02

*Significantly greater (p=0.01) than Treatment 5. †Significantly greater (p=0.01) than Treatment 4. ‡Significantly greater (p=0.05) than Treatment 4.
Beginning and final weights approximately the same as in Table 3.

alley. Figure 4 illustrates this. The center portion contains the main part of the pen including the center service alley, and the automatic feeding device as described in the first part of this article (Figure 1).

The structures on each side of the center portion house the dunging alley which is separated from the pens by a common wall except for the dunging alley door. When this series of doors is shut the pigs are enclosed in the main pen; the dunging alley is then cleaned by actuating two steel blades pulled by an electric powered cable. As one side is being cleaned by a forward motion of the blade, the blade on the opposite side is in reverse and is being readied for its cleaning stroke. The incline from which the waste material is dumped into a manure wagon is seen in the foreground of Figure 4.

Several farrowing, as well as growing-finishing houses, used this enclosed dunging alley principle; but in most cases cleaning was by hand. Ventilation of such structures is accomplished by bringing air through the center ventilators and out through the dunging alley outlets. This makes a positive pressure type of system with the building being practically free from obnoxious odors and condensation. The secret in using such a system is to have the proper ratio of pigs to floor space so they are encouraged to use the dunging alley. Having the dunging alleys well lighted and six inches lower than the rest of the pen also encourages use of this area.

Third Type

The third type of dunging arrangement makes use of slatted floors and liquid manure. In this type of system the dunging alley is inside as in Figure 3 but is separated by a waist-high partition with a dunging alley door arrangement as described in the previous system. The entire dunging alley makes use of the slatted floor principle and the liquid manure flows out of the building into a lagoon.

Agricultural Experiment

Work at the Michigan station certainly emphasizes the practicality of slatted floors. It would seem that the ultimate in pen arrangement would be a combination of these last two systems. An "inside-outside" dunging alley using slatted floors and a lagoon or liquid manure type disposal system would certainly be a low-labor, trouble-free system. This, coupled with an automatic limit portion feeding system, dry or wet, and environmental control and the hog would certainly have it "made in the shade."

Pig-to-Space Ratios

Perhaps it is in order at this point to bring up the pig-to-floor space ratios observed at the various production centers. In Europe as in our country there seems to be considerable confusion as to the proper ratio or proper range in ratios. Except for one very exceptional example, the highest ratio observed was 5 sq. ft. and 1.2 sq. ft. per pig for the eating-sleeping area and the dunging alley respectively. This is a total of 6.2 sq. ft. per pig from about 60 lb. to market weight. Regardless of the pen system used, none of the production centers visited were using over 12 sq. ft. of total floor space per pig. Recommendations in the U.S. range all the way from 8 to 24 sq. ft. per growing-finishing pig.

Recent work in the department of animal industries, Southern Illinois University, indicates that in a completely roofed and enclosed building, pigs from 50 to 210 lb. do not need more than 7 sq. ft. per pig excluding the area taken up by feeders and waterers. A summary of this work is presented in Tables 3, 4 and 5.* Again, the secret of efficient pen management is the proper spatial arrangement of the pen and the crowding of the pen, i.e., high ratio of pigs to floor space area.

The Biehl farm in Hamburg, Germany, attacks the floor space problem by having a growing-finishing house containing five different sized

(Turn to SWINE, page 69)

*From a portion of a thesis presented to the Graduate School, Southern Illinois University, Carbondale, Ill. Rippel, R. H., Jr., 1960. The Effect of Varying Amounts of Floor Space and Feeder Space on the Growing-Finishing Pig.

TABLE 5. Effect of Varying Amounts of Floor Space on Growing-Finishing Swine on a Completely Enclosed, Semi-Automatic Concrete Feeding Floor

Summary of Average Daily Gain in Pounds Trial	I	II
13 sq. ft. (24)	1.28	1.44
11 sq. ft. (30)	1.37	1.40
9 sq. ft. (35)	1.31	1.45
7 sq. ft. (46)	1.21	1.35

Figures in parentheses refer to number of pigs per treatment. Beginning and final weights approximately the same as in Table 3.

Central Speakers Poke Barbs into Federal Controls

By FRED E. TUNKS
Feedstuffs Staff

MILWAUKEE—A feed association passed a resolution expressing opposition to "any type of federal programs which tend to restrict free enterprise through more government control."

A Wisconsin congressman blasted the exchange of individual freedom for material security offered by government and rapped the Cochrane-Freeman farm bill as the "granddaddy of dangerous experiments with our freedom."

An association president said "the single biggest thing facing us as feed men is the expanded program of government interference in business."

And another organization official asked, "Do you believe the farmer could be subject to further government control without having the feed industry come in for its share?" And he answered, "If you do, you are a dreamer since farm production could not be controlled so closely without having our industry come into the picture, too."

Those candid opinions from speakers who appeared here last week at the Hotel Schroeder on the Central Retail Feed Assn. convention program establish a basic philosophy fostered or accepted by many of the more than 500 persons who participated in the event.

"Complete Domination"

Henry C. Schadeberg, congressman, (R., Wis.) slashed away at government controls and said the Cochrane-Freeman bill would "amount to the complete domination of our farm economy—not by the people but by those appointed by office holders who will reach with a giant arm of control to tell the farmer what he can plant, how much he can plant, what he can market and how much he can market and at what price."

Central's resolution opposing more government control mentioned "the new farm program" as an action which would restrict free enterprise.

Eldon H. Roesler, executive secretary of the Central association, said the proposed omnibus farm program would, in the end, place commodity quotas upon each farm, which, in effect, would amount to a license to produce granted by the government.

"It would mean that the value of a farm in the future might be determined by the highness or lowness of the quota for that particular acreage," he said.

Washington planners have privately admitted, Mr. Roesler noted, that there is, indeed, a possibility that the government will attempt to tell the feed industry how many tons of feed it can produce in any one day or specified period.

Adding fuel to the fire, Hiram B. Hegge, Central president, remarked, "We no longer have a climate particularly favorable to private enterprise. The administration is more dedicated to sharing the wealth and public welfare programs than it is to helping business make a profit to pay the taxes that will be needed. . . .

"It is plainly evident from the farm program proposed that the present administration leans toward stronger controls. We do not believe that the farmer can be subjected to strict controls without having similar controls on an agribusiness such as ours. . . . If our farmer is regimented totally, the feed man will suffer the same fate."

Also on the docket were comments by Mr. Hegge and Mr. Roesler about the wage and hour legislation passed recently by Congress and signed by President Kennedy.

Mr. Roesler observed that eventually all feed businesses, regardless of size, may be under the law which has raised the minimum wage from $1 to $1.25 and requires time-and-a-half pay for over 40 hours of work in a week. In the near future, however, if a feed man's business amounts to less than $250,000 a year, "chances are he'll be exempt."

Though the political goings-on in Washington, D.C., got a good working over during the convention, the reelection of the Central Retail Feed Assn.'s officers for another term was void of politics.

Mr. Hegge, Bar-Non Mills, Inc., Whitehall, Wis., was reelected president; L. A. Lauer, Hartford (Wis.) Elevator Co., continues as vice president; Edwin O. Bakke, Bakke Feed & Seed Co., Shawano, Wis., will serve another term as treasurer, and Mr. Roesler remains executive secretary.

LABEL TELLS WHEN CATTLE TAKEN OFF STILBESTROL

DENVER — Recognizing the fact that meat packers are anxious to avoid violating the meat inspection division regulation banning use of the hormone stilbestrol within 48 hours before slaughter, the Colorado Cattle Feeders Assn., early in February, designed a small gummed label to be used by its members as a point of information for the benefit of the cattle buyer, according to Neil Skau, Jr., executive secretary of the association.

The labels carry the legend "These cattle have been withheld from feed containing stilbestrol since . . ," and allow space for the seller to fill in the time and date, as well as his signature.

Each member of the Colorado Cattle Feeders Assn. received a supply of these labels with his 1961 membership card, and they have been in use since early in March. The association will continue to furnish its members with the labels as long as they are required.

IDAHO FIRM BURNS

BELLEVUE, IDAHO — Fire destroyed the Wood River Feed and Seed Co. here, causing damage estimated at $100,000. Ryan F. Mallon, owner of the building and grain elevator, was overcome by smoke while attempting to extinguish the blaze. Some 20,000 bu. of stored grain was destroyed by the flames.

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After the guarantee period, customers are offered a service contract. Under terms of this contract, one very reasonable annual premium provides the customer with one complete service inspection and, if necessary, one emergency service call. The annual service inspection, frequently overlooked by the customer who does not have a service contract, is most important. Hot Spot service engineers are able to implement preventive maintenance . . . assuring maximum reliability.

Hot Spot's service engineers are not only factory trained in the maintenance and repair of Hot Spot systems, but all orphan temperature systems as well. This is done as a special service to owners of orphan equipment who might otherwise no longer enjoy the benefits of their equipment.

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When you plan to buy either temperature detecting or aeration equipment, remember that quality, price, engineering know-how and service are *all* important . . . and service alone keeps your investment working for you long after the system is installed. Who benefits most from Hot Spot's pride in its service department? Customers do.

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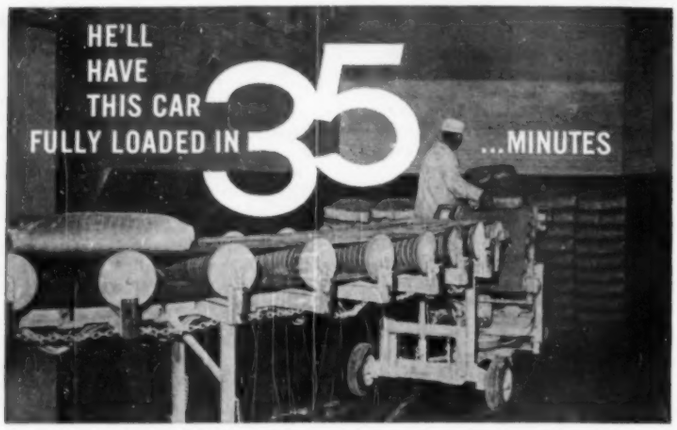

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Will Make Hog Cholera Antibody Concentrate

KANKAKEE, ILL. — Half of the nation's hog cholera serum producers have accepted a licensing arrangement to produce Armour Pharmaceutical Co.'s new patented antibody concentrate, according to Robert A. Hardt, president.

"Antibody concentrate is the result of years of research to improve the regular hog cholera serum," Mr. Hardt said. It was patented Feb. 23, 1960. The new product is said to be twice as potent as the old serum, and only half the volume is required for vaccination. This fact offers several advantages, Mr. Hardt stated.

"First, it is possible to immunize pigs and treat suspected breaks much faster and with less volume shock than with the older product," he said. "Antibody concentrate contains the total globulin fractions of hyper-immunized whole hog blood. After three years of use, no reports of so-called breaks have been received when concentrate was used. The price per hog is the same as for the regular serum.

"Because Armour is in the pork business as well as the pharmaceutical business, we are doubly interested in the control of hog cholera and its eventual eradication," Mr. Hardt said.

"For that reason, we decided to offer licenses under our Antrate-HC patent at less than the usual royalty of 5%. Our offer is also unique in that licensees are required to pay royalties for only five years, even though the life of the patent is 17 years. Use of the patent after the five year period is on a royalty-free basis."

Other serum producers are considering the offer and several more are expected to accept the arrangement in the near future, according to Mr. Hardt.

"Just stand there and talk so we can keep the place ventilated while I fix the fan."

New Hatchery Opened

HOPE, ARK.—Corn Belt Hatcheries of Arkansas, Inc., has held an open house at its new 11,400 sq. ft. hatchery here.

The new facility will increase the firm's capacity to 990,000 eggs by this fall, it has been reported. Corn Belt Hatcheries now turns out about 300,000 broiler chicks weekly and the Hope hatchery produces some 800,000 Hy-Line pullets each year.

Exchange Weighs Grain

SAN FRANCISCO—The San Francisco Grain Exchange has taken over the grain weighing activities of the San Francisco Chamber of Commerce. The chamber has performed this operation for more than 50 years.

The first weighing job undertaken by the exchange was 3,000 tons of hard winter wheat belonging to the Commodity Credit Corp. The wheat was for export.

Here's another LEMANCO unit erected to save mill owners money, time and labor.

Prefabricated with galvanized sides and common wall construction the welded and reinforced corner draw hoppers have a minimum pitch of 60 degrees. Other units than model shown, No. OB 1412102-144, are available in additional compartments and tonnages, which can be installed using hopper or truck scales.

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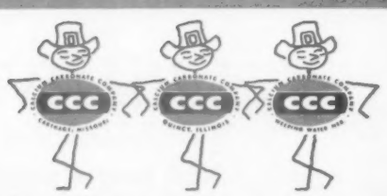
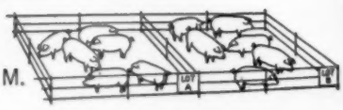


THE THREE PURITANS symbolize the three CCC quarries —in Quincy, Illinois, Carthage, Missouri and Weeping Water, Nebraska—so called because of the high purity of the deposits.

Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.



Increasing vs. Constant Daylength for Laying Pullets

● T. R. Morris and S. Fox, Department of Agriculture, University of Reading, England; British Poultry Science, Vol. 2, No. 1, pp. 59-65, April, 1961.

ABSTRACT

For the past several years there has been a revived interest in the effects of lighting upon the various classes of poultry both in this country and abroad. This is the second paper to be published by these authors during the last year on the effects of some of the newer methods of lighting when used under British conditions (see also Morris and Fox, British Poultry Sci. 1, 2, pp. 25-36).

The present report deals with the results from 144 range-reared Rhode Island Red X Light Sussex pullets, raised identically, divided into 12 groups, housed individually in laying cages and subject to one of the two following light treatments initially at the start of the experiment (23 weeks of age):

(1) Constant 17-hour day—lights from 3:30 a.m. to dawn and from dusk to 8:30 p.m.

(2) Increasing daylength. Ten hours light for the first week, after which the daylength was increased by 20 minutes per week. Thus, a 17-hour day was provided at the start of the trial, and, by the end of the 42nd week, the birds had continuous illumination.

During the growing period the pullets were exposed to continuous illumination in the brooders, but received only natural daylight from four weeks of age until being placed on experiment. All birds were fed the same dry mash and water, free-choice, with no records being kept of feed consumption. The 17-hour daylength was chosen for group 1 birds since it was that daylength which could be maintained throughout the midsummer under English conditions. Although the lighting experiment did not start until the 23rd week, the pullets were placed in the cages at 20 weeks of age. By the 23rd week, about one quarter of the birds, on the average, had started to lay.

At the end of the 21st experimental week, the six pens on each treatment were divided into three pairs on the basis of the previous egg production. Then, one pen from each pair was selected at random to be transferred to the opposite experimental lighting regime for the remaining 21 weeks of the trial. Thus, there were ultimately four treatments in this experiment: constant daylength throughout the trial; increasing daylength throughout; constant followed by increasing daylength; increasing followed by constant daylength.

As is pointed out later in the "comment" section of this article, the sexual maturity of these birds had been determined largely before being placed on experiment since there was no difference between groups as to age at first egg. No differences were observed between treatments as to body weight changes or egg weights. Mortality was low and was not affected by experimental conditions.

It is interesting to note that the treatments had no significant effect upon yield of eggs during he first 21 weeks of the trial, in spite of the fact that the initial rate of lay for the birds on the 17-hour day was somewhat higher (81.8% vs. 78.9%). On the other hand, during the second phase of the experiment (last 21 weeks) those birds which received increasing daylength in the first phase of the experiment laid 7.7% more eggs in the second half than those which started the experiment on the constant 17-hour day. Neither the birds which started on the 17-hour day nor those which started on increasing daylengths benefited by an increase from 17 hours up to 24 hours in the second half of the experiment.

COMMENT

During the past four to five years there has been a considerable amount of research and also publicity on this subject. The popularization of the findings of workers at some of the southern stations (King, 1958, 1959, 1960; Moore et al., 1956; Miss., 1960) has led to the commercial use of "stimulight" by many people with varying results. (Doane Agr. Serv., 1958; Nutrena Mills, 1960; Ralston Purina Co., 1959, 1960, etc.) In this system, or adaptations of it, the

Stabilized Vitamins report

Hot Weather Increases Vitamin A Requirements

• In hot weather, cattle on higher levels of vitamin A suffered less from the heat than did those in lower levels. They also ate more, and none went off feed. Research at Illinois, Minnesota, and Purdue reports vitamin A deficiency on experimental rations containing "more carotene than thought necessary."

W. M. Beeson, Northwest Retail Feed Assn. 1961

Mucopolysaccharide Requires Vitamin A

• Segments of colon, or colon homogenates of rats deficient in vitamin A were able to take up only half the normal amount of sulfate for synthesis into the mucopolysaccharides of the intestinal mucosa. The interference probably is in formation of activate sulfate.

B. Connor Johnson, Univ. of Illinois

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• Not less than 10,000 units per day in the supplement says W. M. Beeson. Deficiencies were observed at Purdue on rations for beef when supplemented at 4,000 units or less. Response was noted at 16,000 units, but gains and appearance were best at 32,000 units. Blood plasma carotene levels were high in all lots, but with stabilized vitamin A supplements the blood plasma levels of A were higher as the feeding level rose.

W. M. Beeson, Feedlot March 1961

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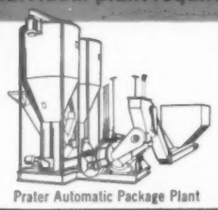
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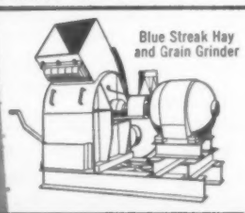
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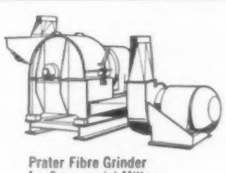
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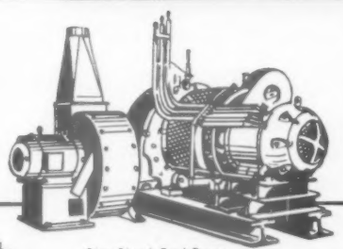
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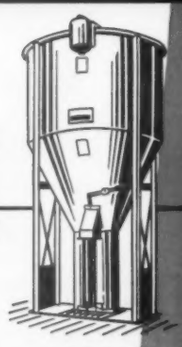
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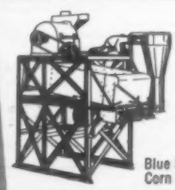
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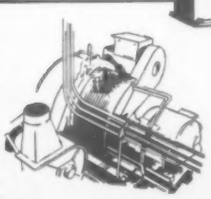
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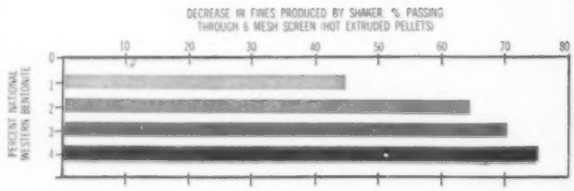

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young stock is raised under conditions of controlled lighting (usually about six hours per day) up to about time of housing (usually 21 weeks). Then 15-18 minutes are added per day up to a maximum of 21½ hours per day. Some colleges have not secured responses with the system (Cornell, 1959; New Hampshire, 1959), and this has been confirmed by some commercial organizations (Beacon Milling Co., 1960; Wirthmore, 1959). It is quite interesting to note in this respect that Bickford of Wirthmore reported in 1959 that their work showed some advantages for meat-type White Rock breeders, but none for lightweight production birds. In general, most negative reports have seemed to come from the northeastern section of the U.S. Why this is so is as yet unknown.

Other colleges have entered the field and the results so far seem in general to confirm the southerners' observations (Maryland, 1958, 1959; McGinnis and Berg, Wash. State, 1960; Lert, U. of Calif., 1960; Bielier, 1959, 1960; Miller and Sanford, 1960; see also McClary, Heisdorf and Nelson, 1959, 1960). The chief effect of restricted lighting during the growing period of the chick is to delay sexual maturity. Thus, the same objectives are achieved as in the "restricted feeding" programs now so popular—but, at much greater safety. It is well-known that restricted feeding offers a means of increasing egg size of broiler breeders and, for many production bred strains, increased production. True enough, the results with restricted feeding have varied greatly, and in a similar manner to the results reported above for lighting restriction. This is to be expected and only serves to warn us that we must adapt such programs to our own management methods and conditions.

I think it is fairly safe to say that pullets which are raised under restricted lighting, and then given regular weekly increases in daylengths, starting with fairly short days, will lay about 3 to 5% more eggs, on the average, than those given an abrupt increase at the start of the laying year and constant days thereafter. Thus, the old standard recommendations of 14 to 15-hour days for laying houses are not as valid today as they were before the new wave of lighting research took place.

Several other reports allied to the subject of lighting are also worth noting. At Montana State College (1960) the effect of intermittent lighting on egg production has been studied. After 20 weeks of age, four light periods per day were used, two of one hour duration during the daytime, and two of 15 minutes at night. All light-dark cycles were six hours in length. This intermittent system was compared with a 14-10 hour light-dark cycle. All pullets were reared in normal light to 16 weeks of age; from 16 to 20 weeks, they received 8 hours per day. The experimental light systems were used from 20 until 36 weeks of age. Pullets on intermittent light averaged 150 eggs compared with 160 eggs for those on the 14-10 light-dark cycle.

Another variation of the light-dark cycle usage has been reported by the Heisdorf and Nelson Farms (McClary, 1960). In this system the chicks are started on a 22-hour day which is reduced ½ hour per day each week to 18 weeks of age. After 18 weeks of age, natural light is used until the start of production, and then the birds are given a 15-hour total day. Compared with birds raised under natural conditions, the reduced daylength group will be delayed in maturity about 18 days (based upon age to reach 50% lay). After peak production was reached, the rate of lay for the light controlled group remained about 8 to 10% above that of the natural-lighted group. However, at one year of age, the light controlled group led the natural group by only two eggs per hen. Egg size was slightly larger in the light-controlled groups. The current recommendations from this breeder now advise the following system: Start baby chicks on a 15-hour day, then reduce light about 18 minutes a week so that they are down to an 8-hour day at laying time. As they lay, gradually step-up the light—about 15 to 20 minutes a week—until a maximum of a 20-hour day is reached. Then, hold the 20-hour level for the balance of the laying period. Good field results have been reported for this method so far.

In view of the greatly increased activity in this area of poultry research we can expect more findings of interest which should be watched carefully as they develop. This is another example showing all of us that commonly accepted practices may change quite rapidly when actual research is done on them using modern methods, rations and stock. It is unfortunate that present space does not permit mention of several other noteworthy reports by other colleges of fundamental nature on this subject.

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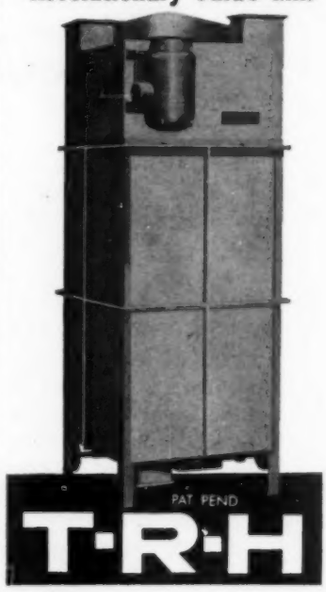

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The new T-R-H Square Mixer combines superior features of horizontal batch-type mixers with space-saving of vertical type, guaranteed to out-perform both! Super-mixing action cuts mixing time 30%, yet produces more uniform mix, with dust-free operation. Adaptable to all materials. Mixes feeds, flour, spices, chemicals, minerals, etc.
Unique design and patented tapered worm of the T-R-H Square Mixer save space (1-ton capacity in only 16 sq. ft.); simplified construction reduces installation and upkeep costs, makes stainless steel models economical. Mixer has multiple inlets and outlets; doors are easily accessible for quick inspection and clean-out.
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Why are more and more feed packers using Union-Camp I&C bagging equipment?

Over 1000 Union-Camp I&C installations have been made in the last six years. Here are 8 reasons behind their astonishing popularity.

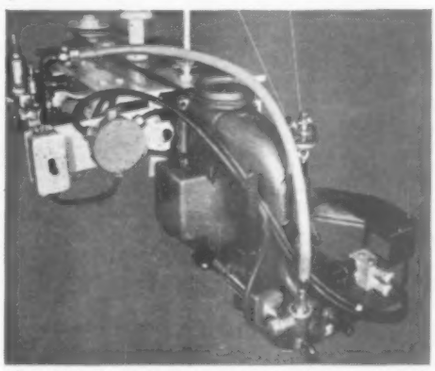
1. Reduced Packaging Costs. I&C's pay for themselves. Their fast, *automatic* operation reduces packaging and labor costs, increases profitability. Dozens of repeat orders attest to their efficiency and economy.

2. 20-a-Minute—and More. The Union-Camp I&C Bagger was the first machine to introduce high-speed filling of open-mouth multiwall bags. Speeds well in excess of 20 bags per minute can be sustained, depending on the flow of the product.

I&C V-Type Sewing Conveyor. Fixed chain brackets eliminate need for rollers. This means no freeze-ups, fewer breakdowns.

3. Outstanding Flexibility. With the versatile I&C, you can make weight changes from 25 to 200 lbs.—with just a turn of a scale dial knob! No bag clamp is necessary.

4. Accurate. The I&C *automatically* pre-weighs the net amount of material before it is dumped in the bag. At speeds of 20 bags a minute and more, weight variation is within *plus or minus 2 ounces* on 100 lb. packages of uniform granular or pelletized products.



The I&C Acto-Cutter automatically starts and stops sewing action and cuts threads between bags. An outstanding time and labor saver.

5. Low Maintenance. Simplicity of design is a major feature of I&C equipment. Another is sturdy construction. Many packers report low maintenance cost a key factor in their selection and repurchase of I&C bagging equipment.

6. Cuts Production Time—Speeds Service. With the I&C you can bag and ship required tonnages faster. There is usually little or no downtime. Thus you speed customer service and delivery, reduce costly overtime.

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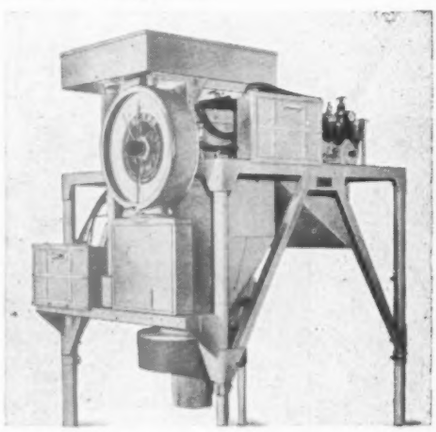
8. Valuable Survey Service. Union-Camp package machinery specialists make comprehensive surveys of your plant. They make up exact machinery and installation specifications and layouts. They train operating personnel, help determine the actual savings for your operation. All at no cost or obligation.



Newest I&C Bagger—the UB-101. Machine's features include dial scale which provides for instantaneous weight changeovers from 25 to 200 lbs. with a turn of a knob.

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Pelleted Barley for TURKEYS

By Reece L. Bryant and W. C. Lockhart

In the fall of 1960, a series of experiments was started to determine the value of barley in its several forms as a feed for growing turkeys. The material that is being reported here covers only that portion of the first trial dealing with a comparison of corn and barley pellets.

Approximately 80 to 85% of the total feed consumed by turkeys is eaten between 10 and 24 weeks of age. The greater portion of this is grain in some form rather than in the formula feed. Therefore, if there are to be monetary savings by using barley, the greatest potential is during this growing period. For this reason the poults were fed on the regular experiment station diets until 10 weeks of age before being placed on the experiment.

EDITOR'S NOTE: *The accompanying preliminary report is from North Dakota Farm Research, issued by the North Dakota State University Agricultural Experiment Station, Fargo. The authors, Dr. Reece L. Bryant and W. C. Lockhart, are poultry husbandman and assistant poultry husbandman, respectively.*

At 10 weeks the poults (Broad Whites) were divided at random by band numbers and placed in the experimental pens. The poults had been sexed at hatching time and an equal number of each sex was placed in each lot. Three lots were selected at random to receive each diet. The birds were weighed individually at 10 weeks and at the end of each two-week period thereafter. Feed consumption data were collected for each period. The birds were kept in confinement throughout the trial.

Composition Told

Table 1 gives the composition of the 35% concentrate that was fed in pelleted form along with the corn or barley pellets. The barley used weighed 47 lb. per bushel. In order to insure the same proportion of concentrate to grain in all lots these (concentrate - corn or concentrate-barley) were fed after being blended together in a horizontal-type feed mixer. The amount of grain to concentrate was increased as the birds

TABLE 1. Composition of Concentrate

	10-16 weeks lb.	17-22 weeks lb.
Soybean meal	55	55
Fish meal	10	10
Alfalfa meal (17%)	7	10
Fish solubles	3	3
Dried buttermilk	3	3
Oats (heavy)	12	7.5
Calcium carbonate	5	5
Dicalcium phosphate	4	4
Salt (iodized)	0.5	1
Vitamin premix*	1	1.5
Histostat-50	2 per ton	3 per ton

*Vitamin premix	Units per pound
Vitamin A	400,000 U.S.P. units
Vitamin D_3	100,000 I.C. units
Vitamin E	800 I.U. units
Riboflavin	300 mg.
Niacin	2,400 mg.
Calcium pantothenate	600 mg.
Choline chloride	35,000 mg.
Vitamin B_{12}	0.3 mg.

Also trace minerals — manganese, iodine, iron, copper, cobalt and zinc.

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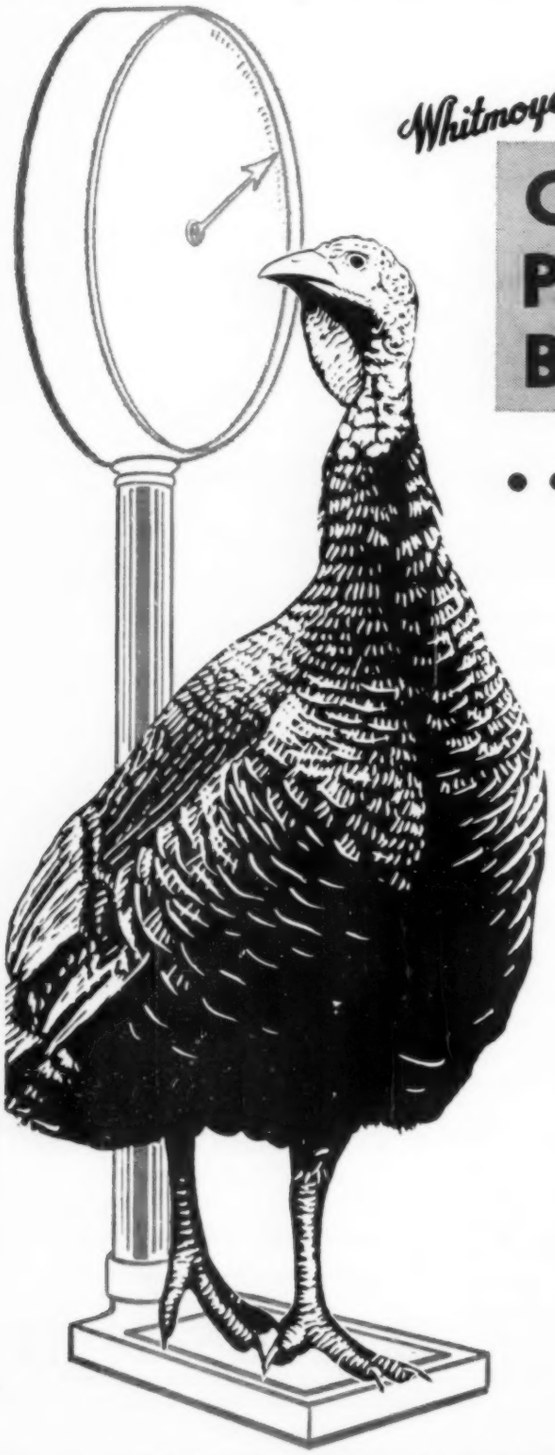
CARB-O-SEP PREVENTS BLACKHEAD ...not weight gains



Experience has proven that Whitmoyer CARB-O-SEP is in a class by itself when it comes to preventing blackhead without interfering with weight gains.

That's not just our experience — but also the experience of growers, feed manufacturers and college experiment station workers. Get the complete CARB-O-SEP story if you're not already enjoying CARB-O-SEP's multiple benefits. Write Dept. FS-6.

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74,400
day-old pullets...
Housed:
84%
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TABLE 2. Mortality, Weight, Gain and Feed Efficiency

Lot	Treatment	Birds at 10 wks. of age	Average wt. in lb. at 10 wks.		at 22 wks.		Average gain in lb.		Mortality		F.E.*
		No.	F†	M‡	F†	M‡	F†	M‡	F†	M‡	
6	Corn	40	6.38	7.64	15.05	21.37	8.68	13.73	1	2	5.02
9	Corn	40	6.05	7.52	14.56	22.89	8.50	15.36	1	1	4.87
10	Corn	40	6.13	7.83	15.11	22.57	8.98	14.74	0	4	5.04
Total & average		120	6.19	7.66	14.91	22.28	8.72	14.62	2	7	4.97
1	Barley	40	6.33	7.49	15.23	22.94	8.90	15.45	1	1	4.91
4	Barley	40	6.27	7.33	14.87	22.19	8.60	14.86	0	1	4.95
12	Barley	40	5.99	7.64	14.82	21.79	8.83	14.15	0	3	5.15
Total & average		120	6.20	7.49	14.97	22.32	8.77	14.83	1	5	5.00

*F.E.—Feed efficiency, pounds of feed to produce 1 lb. of gain (10-22 weeks).
†F—Females.
‡M—Males.

grew older and their protein requirements decreased.

The results to 22 weeks of age are given in Table 2. This table shows some differences in gain and feed efficiency between lots on the same feed. This is to be expected as the chances are very remote that three lots of turkeys could be selected at random and each perform the same. However, when the three lots receiving the barley pellets are compared as a whole with the three receiving corn the differences are negligible. There are greater differences between the two lots on the same feed than between the treatments.

Results Told

The table does indicate that to 22 weeks of age, under the conditions of this experiment, pelleted barley can be expected to produce turkeys as heavy in weight, with approximately the same gain and requiring the same amount of feed to produce each pound of gain, as turkeys fed on corn.

Subsequent trials may give results that are not in complete agreement with those reported here. However, these data are based on three lots on each treatment under the same environment. They are being released as a preliminary report for those who may wish information before all work is completed on this phase of the project.

Use of 'Ethoxyquin' On Labels Okayed

WASHINGTON — The Food and Drug Administration has issued a food additives order pointing out that labeling of dehydrated alfalfa and feeds containing the antioxidant ethoxyquin (Santoquin) need not carry the long chemical name of the product — 1,2-dihydro-6-ethoxy-2,2,4-trimethylquinoline.

It had been indicated earlier that FDA officials would have no objection to dropping the unwieldy chemical name on tags, bags and registrations. (Feedstuffs, May 20.)

FDA announced in the Federal Register of June 6 that food additives regulations were being amended to provide for use of the term ethoxyquin.

Labels of feeds containing ethoxyquin are to include the statement "Ethoxyquin, a preservative," or "Ethoxyquin added to retard oxidative destruction of carotene, xanthophylls and vitamins A and E."

Most dehydrated alfalfa produced this year is expected to have ethoxyquin added to preserve carotene and xanthophyll content.

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By ideal conditioning of raw materials you are assured of a product that you want in your formulas. With the new Expander you can convert the starches in grains such as wheat, corn, rice, milo, etc., into a uniformly tender, crisp and highly palatable product.

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Heat Cuts Broiler Growth

Hot weather can seriously cut down growth rate of broilers and may even cause heavy losses from heat exhaustion unless broiler raisers guard against such happenings, says Joe W. Sicer, Purdue University extension poultryman.

The first hot spell of the season is especially dangerous, according to Mr. Sicer, since the birds have had no chance to become acclimated to the heat.

An abundance of drinking water is the broiler's first necessity. Some of the most successful broiler raisers double the amount of drinking space during hot months, Mr. Sicer said. Waterers should be so placed that the chickens are never more than 10 ft. away from a drinking place.

Old, re-used litter is often the source of aggravating heat for the summer brood of broilers because of the composting action therein. Fresh litter should be used for the summer broods and it should be held down to just enough depth to maintain dryness.

If black roofs are painted with aluminum asphalt paint or whitewashed, much of the heat from the sun will be deflected and the house made five to 10 degrees cooler.

Mr. Sicer says fans can help move body-generated heat out of the building. A series of fans through a long building, spaced about 20 ft. apart and all blowing the same direction, can keep the air moving steadily if doors at both ends of the building are open. Tripod mounts for the fans can be made of metal pipes, permitting placing the fans to best advantage, or the fans may be suspended from the ceiling. A fogging nozzle attached to each fan that will spray a mist of water into the air current will help cool the air in the house.

Chickens are particularly susceptible to heat, states Mr. Sicer, because they have no perspiration glands.

◆

Dairymen Contented, Too

Dairymen can be as contented as the cows they milk when cooler weather arrives providing they take action now while the weather is warm.

An agricultural engineer at Cornell University reports solving the problem of cold feet for milkers, traditionally a plague to dairymen in milking parlors. The pit the workers milk in acts as a trap for heavy cold air, chilling them from the waist down.

The device works with hot water circulated through pipes installed along the sides of the pit. It was noted that previous attempts to warm the pit failed because heat was introduced too high in the parlor.

The designer, Clesson N. Turner, says the system can be installed in new or existing milking parlors. He pointed out that all electrical parts are manufactured or assembled in a packaged unit that can be installed outside the moist pit area, reducing the danger of shock and giving the equipment longer life expectancy.

◆

Trend to Drier Silages

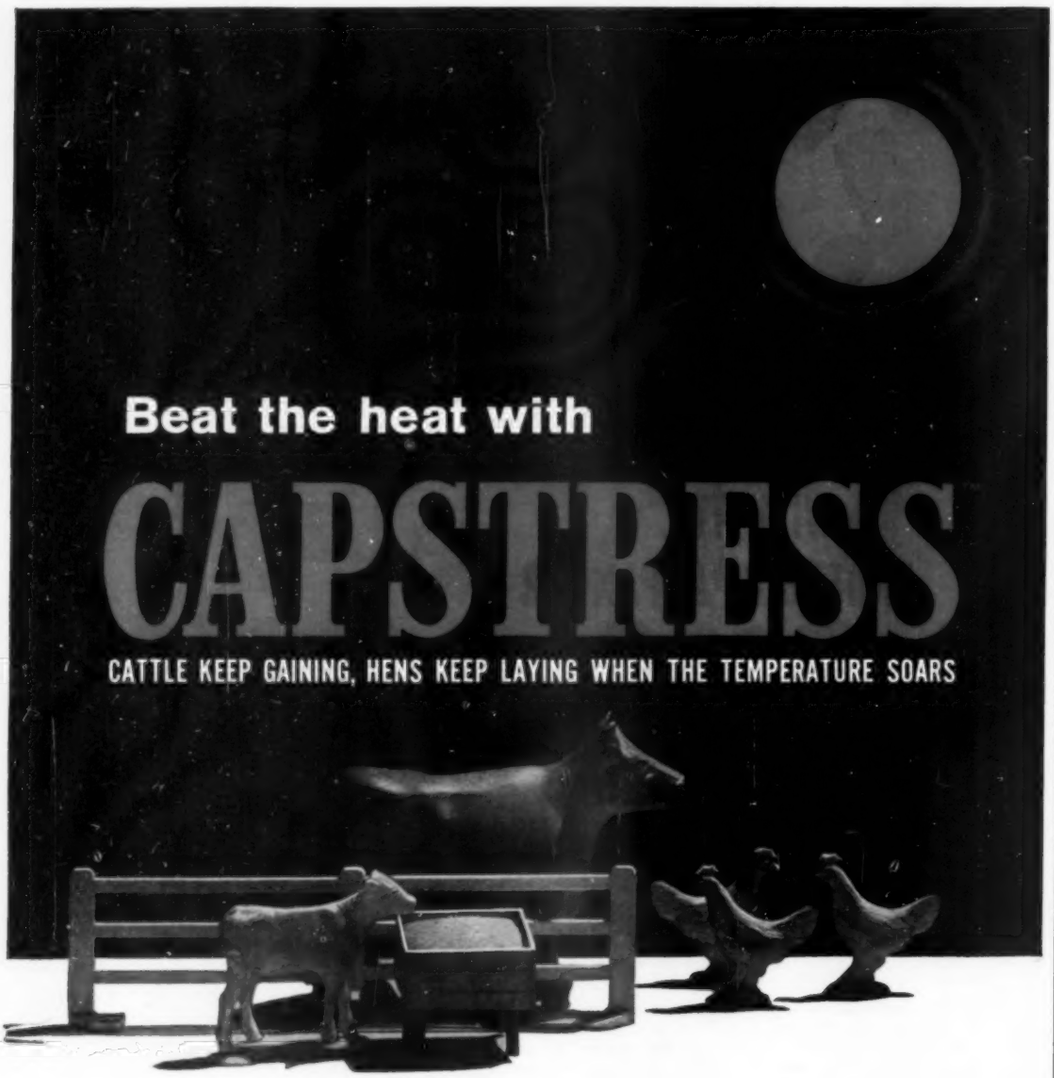
The trend toward drier silages, with 40-60% moisture, is definitely on the way and it appears to be a step in the right direction, P. H. Cole, extension dairyman at the University of Nebraska, says.

He states that recent U.S. Department of Agriculture studies show that consumption of silage, milk production and growth of heifers have been superior on low moisture silage when compared directly with high moisture silage.

Mr. Cole states that two developments have encouraged the interest: "First was the development of the gas-tight silo which showed that we could successfully store low moisture silage. The second was the recent finding that low moisture silage is a high quality feed. In some trials low moisture silage has been equal to hay as a feed."

He also advices that with proper procedures, low-moisture silage can be stored in conventional silos.

The dairyman points out that there are some very real advantages to low moisture silage: "Seepage problems are largely eliminated and odor problems are reduced. In addition,



While weaker animals seek the shade, cattle and poultry fed Capstress keep right on eating under extremes of temperature. It is a water-dispersible vitamin A product for use in water or feed. It is built to meet specific stress conditions: heat, disease or deficiency. It is the ideal product for the new *therapeutic,* supplemental feeding of vitamin A now being recommended by prominent nutritionists.

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the dairyman can store much more dry matter per silo if he uses low moisture material. All in all, low moisture silage looks like a good bet for dairymen, but it does take a little extra care in processing and storing."

◆

Blood Spot Flare-Ups

Laying flock owners have been advised that there are nutritional differences which can influence blood spots in eggs. The University of New Hampshire poultry department advises poultrymen that more blood spots are found when rations are deficient in vitamin A. Alfalfa seems to reduce the number of blood spots as does turning the birds out on range, it was stated.

The university says that certain chemicals in the ration may increase the blood spot problem.

The report said that contrary to modern belief there is no research work indicating that fright or nervousness causes blood spots. A recent report does indicate that certain sounds decidedly increase the percentage of blood spots, according to the report. It was also pointed out that 24-hour lighting increases blood spot incidence.

◆

Farrowing House Heating

While many persons are thinking of cooling, hog raisers have been advised that now is a good time to be thinking about installing heating facilities in their farrowing houses. A. J. Muehling, University of Illinois agricultural engineer, says that electric heating cable is an efficient method of space heating.

To test his idea, Mr. Muehling built a farrowing house at the university with this type of heating and found it provided uniform heating and noted that it is safe and economical to operate. He commented that temperature control and ease of installation and maintenance are other advantages. The cost, he said, was about $17 per farrowing stall.

In remodeling of facilities, Mr. Muehling says the cable can be laid on the old floor and a layer of concrete poured over it.

For best results, Mr. Muehling advises insulating the ceilings and walls and installing a vapor barrier in floors, walls and ceilings. Proper ventilation is also needed, he said.

Purchase Warehouse

MONTPELIER, VT.—E. W. Bailey & Co., Inc., manufacturer of livestock and poultry feeds, has purchased the warehouse of the Francis J. Murtagh Co., near the Main St. Bridge, and plans to use it for storage of feed products.

Revenue stamps indicated the purchase price was $50,000, according to Robert L. Jaffrey, city clerk.

Glenn C. Mix, president of the feed manufacturing firm, said there were no immediate plans for alterations to the newly acquired building.

S.E. Firms Increase Broiler Credit in April; Bank Outstandings Off

ATLANTA—Trade credit outstanding for broiler production at selected feed manufacturers in six southeastern states was significantly higher in April than in the month before, the Federal Reserve Bank of Atlanta reports. On the other hand, selected banks reported that outstanding credit extended by them for broiler production was down in April compared with March and a year earlier.

In the category of credit advanced by feed manufacturers, producer accounts showed the largest month-to-month changes, the Atlanta bank reported. Outstandings in April of this year exceeded those of a year ago because large gains occurred in producer accounts.

An increase in new bank loans during April was more than offset by repayments during the month. And outstandings of loans direct to producers declined more than the outstandings with dealers, according to the Atlanta bank's survey covering Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee.

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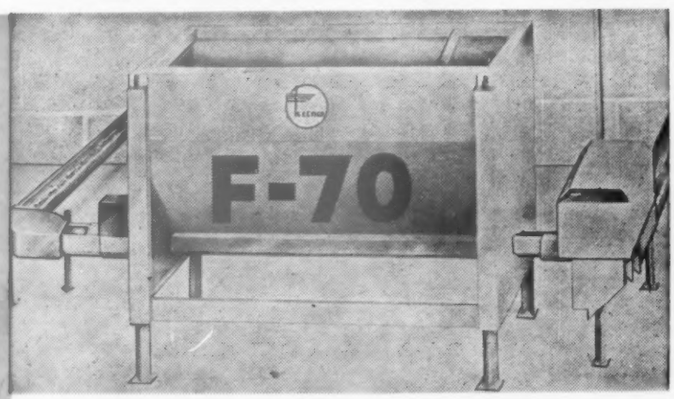

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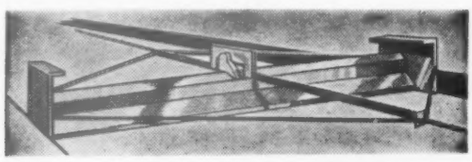

KEENCO PIT CLEANERS

This heavy-duty machine features heavy-gauge steel scraper blades shown above. Blades are pulled through droppings pits by a specially coated steel cable. Field reports show that these extra rugged Keenco Pit Cleaners "hold up" where others fail.

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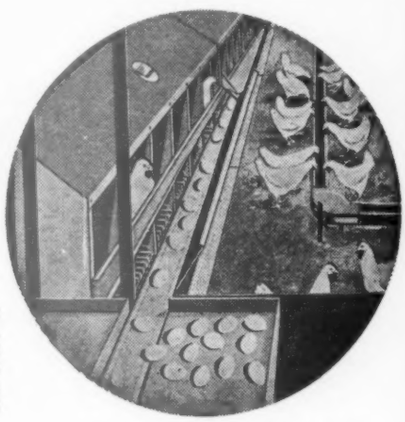

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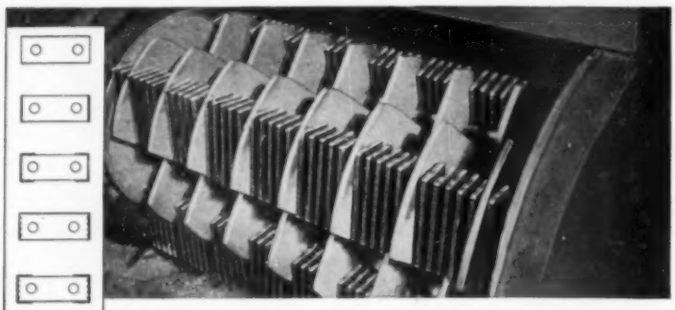

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TABLE 1. Cumulative Cost by Week for Growing Medium Replacements

Week	Chick	Litter	Fuel	Misc.*	Feed	Total
	cents	cents	cents	cents	cents	
1	36.0	.600	1.000	1.0	1.130	$0.40
2	36.2	.603	1.504	2.0	2.819	.43
3	36.3	.605	2.010	2.0	5.062	.46
4	36.5	.608	2.518	2.5	8.130	.50
5	36.6	.610	3.029	2.5	11.740	.54
6	36.8	.613	3.042	2.5	15.519	.58
7	36.9	.615	3.055	3.5	19.988	.64
8	37.1	.618	3.068	3.5	25.374	.70
9	37.2	.620	3.081	3.5	31.436	.76
10	37.4	1.223	3.094	5.5	37.937	.85
11	37.5	1.228	3.107	5.5	44.873	.92
12	37.7	1.233	3.120	5.5	52.007	1.00
13	37.8	1.238	3.133	5.5	59.339	1.07
14	38.0	1.243	3.146	5.5	66.641	1.15
15	38.1	1.248	3.159	5.5	73.981	1.22
16	38.3	1.253	3.172	6.0	81.288	1.30
17	38.4	1.258	3.185	6.0	88.562	1.37
18	38.6	1.263	3.198	6.0	95.803	1.45
19	38.7	1.268	3.211	6.0	103.228	1.52
20	38.9	1.273	3.224	6.0	110.620	1.60
21	39.0	1.278	3.237	6.5	117.979	1.68
22	39.2	1.283	3.250	6.5	125.593	1.76
23	39.3	1.288	3.263	6.5	133.603	1.84
24	39.5	1.293	3.276	6.5	142.005	1.93

*Includes vaccination, medication and insurance.

Cost of Producing Replacement Pullets

CAYUGA, N.Y.—The approximate amount of money needed to finance medium replacement pullets (medium replacement refers to the average brown-egg producing bird) is shown in the accompanying table prepared by the Beacon Milling Co.

The table shows cumulative cash costs. It does not include the cost of such items as labor, buildings, equipment, depreciation and interest on investment.

Fixed cash costs such as chick cost, litter, fuel and miscellaneous are adjusted to take care of mortality and culling losses. Mortality and culling losses are computed to be 10% of the number of chicks started.

Pratt Laboratories Sold

AUSTIN, TEXAS—C. J. Martin & Sons, Inc., Austin, has purchased the Pratt Laboratories of Junction City, Ky., according to W. L. Hall, vice president of C. J. Martin & Sons, Inc.

Pratt Laboratories will continue to operate from Junction City as a division of C. J. Martin & Sons, Inc., Mr. Hall said.

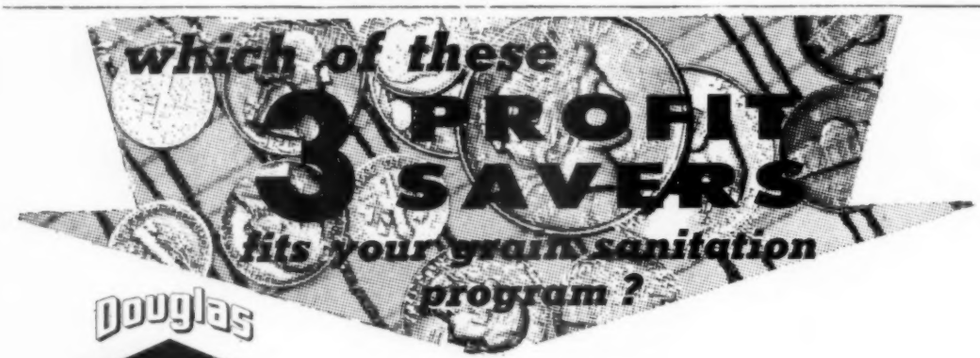
The Austin firm will service and sell the Martin and Pratt products throughout the southwestern part of the U.S., Mexico, Central and South America.

Pratt Laboratories will service and sell the Martin & Pratt products throughout the eastern, midwestern and northwestern part of the U.S. and Canada, he explained.

Exchange Feature Set

SAN FRANCISCO—The San Francisco Grain Exchange's "telephone trader" will be featured pictorially in an issue of the American Telephone Co.'s magazine, which reaches about 84,000 readers. The telephone company spent one day recently taking pictures of the unique facility.

The "telephone trader" permits members of the San Francisco Grain Exchange anywhere in California to call the exchange and listen to the bidding, as well as bid themselves, and be heard by others present on the floor.



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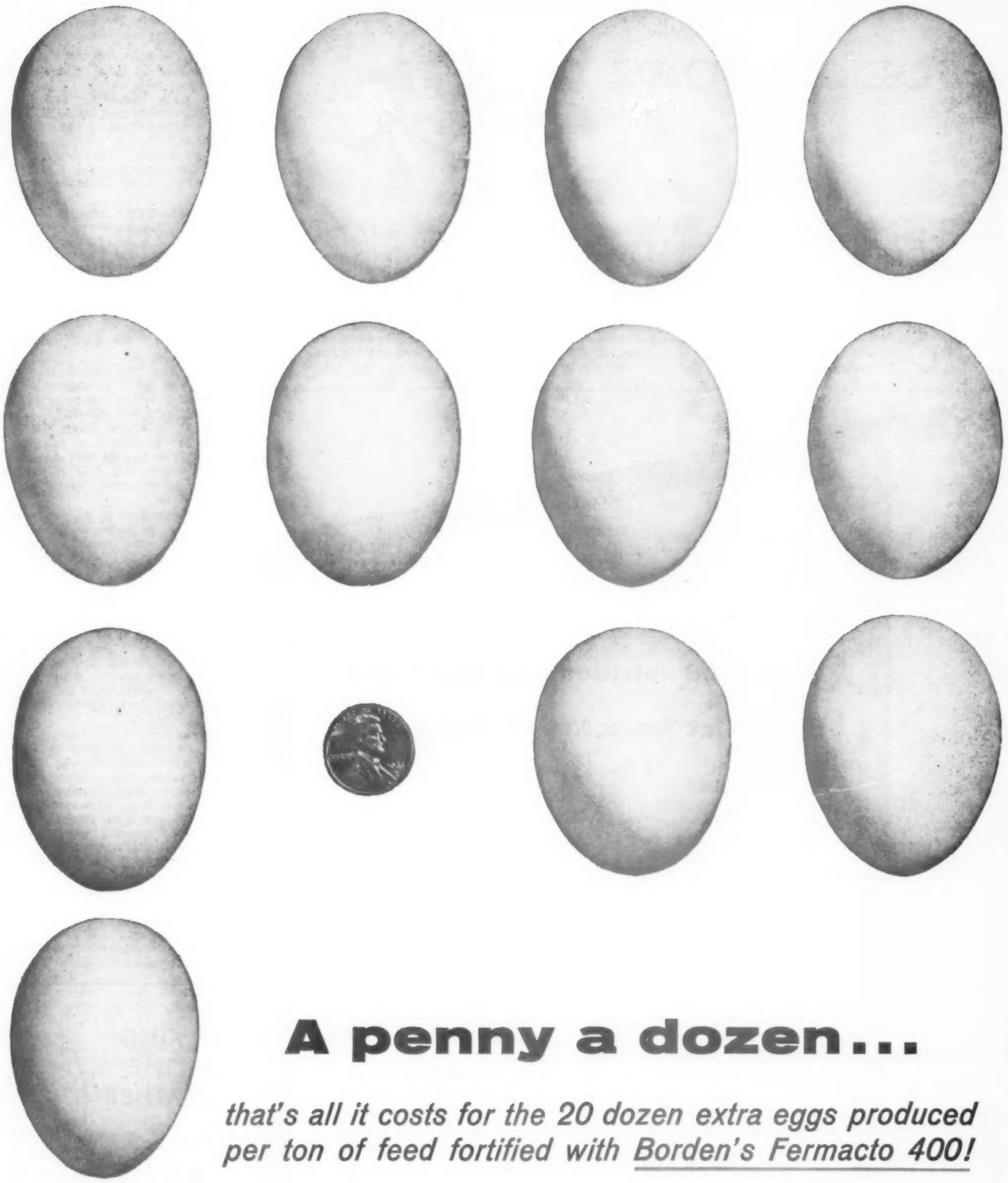

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Better products through Borden Research

JOE BROOKS

BY AL P. NELSON

Seasonal Sales Promotion

Stocky, overalled Ed Eggers, manager of Joe's Endeavor branch custom mill, drove a small red truck up to the Hansen's Creek main office and entered the mill.

"Hey, Ed," grinned Milt Peters. "Must be nice being boss of a branch mill. You can run things like you want, go where you want, and no boss to check on you."

Ed Eggers chuckled. "Dream on, Buster," he said. "Dream on. Don't you know that at the end of the month, Joe looks over my 30 day report with a magnifying glass. If my sales aren't up, costs down and profits greater, then Joe phones me to come over for a conference."

"Is that why you're here now?" asked Milt. "Is Joe calling you on the carpet?"

"Say, you are worse than my mother-in-law, Milt," said Ed a little sharply. "She's so curious she's asking questions all the time. I always tell her not to push her luck." He moved to the office door.

"Well, are you being called on the carpet?" persisted Milt.

"Nuts to you, me lad," Ed said, saluting in a well known rural way.

Inside Joe's office, Ed saw the brown haired feed man sitting at his desk checking customer cards.

Idea for Business

"Hi, Joe," he said. "Got time to talk about an idea?"

Joe smiled broadly. "You know how I feel about good ideas, Ed. They help us keep ahead of our competitors."

"So I figured." Ed sat down and lighted a cigarette. "Joe, we are in the midst of the fly season, aren't we?"

Joe nodded. "We certainly are. The house fly, the horse fly, the cattle face fly and a lot of other types of flies. I've got quite a stock of chemicals in to combat the problem, and so have you down at Endeavor. We sell a lot of spray materials, also materials you apply in other ways for face flies."

"That's it," Ed said, "but who knows it?"

Joe gasped. "Who knows it? Why, man, we've got it on display. And I advertise it in the newspaper and in our mimeographed bulletin."

"That's true," Ed agreed. "We get a certain proportion of sales that way. But so long as flies are a real menace right now, let's go all out and really get some business out of the situation."

Joe leaned back in his swivel and folded his broad hands behind his head. "Ed, you puzzle me today. What is on your mind? What could we do to sell more fly control stuff than we are now doing?"

Never Satisfied

"At our sales training meetings, Joe, you have always told us never to be satisfied with our present sales records, no matter how good they are. You have said we should always look for improved ways to sell more merchandise and to please customers."

Joe smiled. "That's right, Ed. I'm sure glad that some of that sales training has sunk in."

"It has, Joe. The other day when I was stacking that fly control stuff on the shelves I got to wondering how we could sell more of it. I got an idea, and I jotted some of the program down." Ed reached in his overall pocket and pulled forth a sheet of paper.

"Good, good," Joe said. "Let's hear about that idea."

Ed Eggers slowly unfolded the sheet of paper. "Well, first of all, Joe, we should have Smiley Johnson paint a large, colored picture of a fly

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Read CAPITAL COMMENT In FEEDSTUFFS

on a piece of white cardboard, measuring about 3 by 5 ft."

"Three by 5 ft.!" exclaimed Joe. "That large?"

"Sure. You want customers to see it, don't you? Then stick some copy under the picture of that big fly. Let it read. 'Get the dirty fly with our fly control. The fly spreads disease. He bites. He sucks blood. He causes beef cattle to lose weight. Dairy cows get mad swishing their tails at him, and milk production drops. Give him the works! Ask us.'"

"Whew," said Joe, "that is pretty strong copy. You sure get your point across."

Ed flushed with pleasure. "Well, I use words country folks can understand. When I read it to Milly you oughta see her eyes open. She never knew I had it in me. She said that if I tried, maybe I could write a best seller book, but, shucks, I don't have the time to try."

"Well, that copy has punch," Joe said. "And where would we put a sign like that?"

"A sign?" exclaimed Mr. Eggers. "You'll want one here at the farm supply store, right atop the fly control display. And I want one down at the Endeaver mill store. I want folks to see that sign the minute they come into the store, so they'll be stimulated to buy fly control merchandise right away, and not put it off."

Joe chuckled. "I like the idea," he said. "Aren't we lucky we've got somebody like Smiley working for us, an employee who can also paint signs? Man, that sure cuts down sign painting costs."

"Oh, Smiley's all right," Ed said, "and handy with a brush. Course you've got to give him ideas to work with."

"That's it," Joe said appreciatively. "Ideas come first—putting them into practice comes next."

"We can save those signs and use them next year, too," pointed out Mr. Eggers. "Their appeal won't wear out in one year."

"That's right," Joe said thoughtfully. "And I don't see why we can't use big cardboard signs like that to push other seasonal stuff. Perhaps we could use another sign right now on cattle oilers."

"Sure," said Ed. "Place it far enough away from the fly sign so it doesn't conflict for attention at the same time. I would say two big seasonal signs like that can be used together. And the cattle oiler sign can be saved for next year."

Joe chuckled. "That cattle oiler sign could be humorous. Perhaps Smiley could paint a sign showing a happy, smiling steer rubbing his back on a cattle oiler."

Ed rose to go. "Well, Joe, don't forget to get one of those signs for me at Endeaver. We want to keep pace with the Hansen's Creek Mill."

"Don't worry, Ed," smiled Joe. "And you just keep thinking of those sales promotion ideas. When sales go up, your cut of the profits as manager of the Endeavor mill goes up, too."

Ed chuckled. "I know that, Joe. I'm thinkin' of it all the time. I'll need more pay—Millie told me last week that we have our fifth comin.' Financially, I want to prepare for it now."

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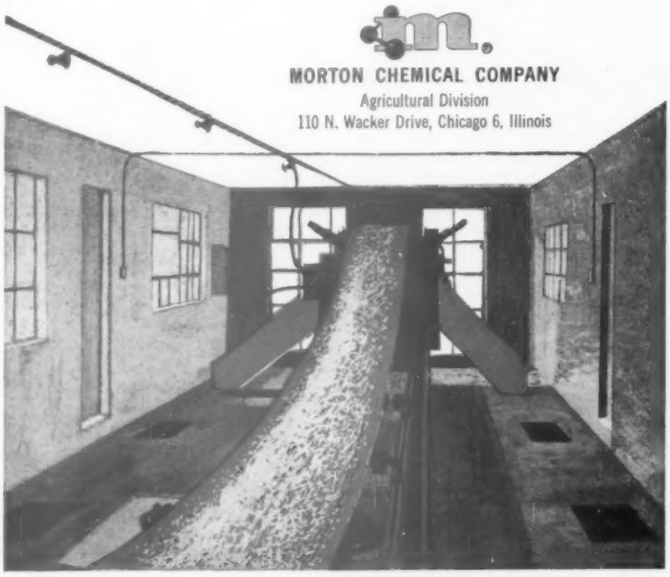

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Maryland, Georgia Studies Determine What Condemns, Downgrades Broilers

What condemns or downgrades a broiler?

The need for research to provide specific answers to that question and to find out what can be done about reducing broiler condemnations and downgrading apparently has been fully recognized by agricultural universities and colleges, especially those in the major broiler producing areas.

Two examples of extensive research concerning broiler grade defects and quality control methods are reports of recent investigations by the Universiity of Maryland and the University of Georgia. Both are significant in that each tells in detail what defects are most prevalent, what causes these defects and how condemnation percentages can be reduced.

Of Great Importance

Studies of the Maryland and Georgia types are of paramount importance because of the alarming increase in condemnations coincident with development of the compulsory inspection program and because of the resulting losses to the grower and processor.

The Maryland and Georgia studies complement each other. The Maryland analysis is primarily concerned with factors as seen in a processing plant, while the Georgia report is concerned more with the grower's housing facilities and management practices.

Conclusions drawn by the authors of these research reports indicate that respiratory diseases, bruising, breast blisters, fleshing, misbled and general discoloration are most responsible for downgrading or complete condemnation.

Georgia researchers recommend that growers maintain thorough disease prevention and control programs and the Maryland investigators suggest that improvements are needed in methods of catching, transporting and unloading birds.

Maryland Study

The University of Maryland study was conducted at six poultry processing plants in Delmarva. These plants employ sampling techniques commonly practiced by quality control personnel in other types of processing plants.

Samples were drawn from flocks totaling more than two million birds. A total of 23,200 individual birds from more than 200 flocks were examined for defects.

Authors of the Maryland report, "Evaluation of Broiler Grade Defects by Quality Control Methods," are John L. Crothers, Jr., department of markets, and Dr. Norman V. Heibacka, poultry department.

The combined data showed that the average percentage of grade A birds in Delmarva at the particular time of this study (1960) was approximately 67% with one third being downgraded for various reasons. The major causes for downgrading were: Bruising, breast blisters, fleshing and misbled and general discoloration along with a number of other minor causes.

Considerable variation exists between flocks and between plants, but this study points out where emphasis could be placed to bring about improvement in the over-all quality of poultry in Delmarva. One principal area of improvement indicated by the study, according to the Maryland researchers, would be in materially reducing the number of bruises by modernizing methods of catching, transporting, and unloading poultry and by stressing certain areas of management.

"Since fleshing is such an important factor affecting the quality of poultry, more careful studies should be made of bird sources and factors in management which may affect fleshing, as well as disease, which undoubtedly influences the amount of fleshing on the bird," the researchers said. "Other possible improvements appear to be in the area of processing procedures. These are indicated by the fact that operational (plant caused) bruises, cuts and tears, and misbleds and general discoloration are also important in the over-all quality picture."

Causes of Undergrades

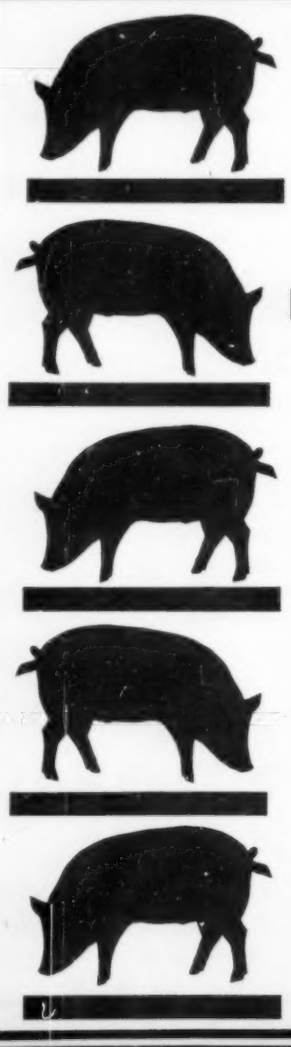
According to the Maryland report, there were some 57 defects that showed correlation to each other. Some of the more important relationships were:

As weight goes up, finish and pigmentation improve. Conversely though, as weight goes up, breast blisters also increase, a very undesirable relationship.

The category of bruises accounted for half of all the reasons for downgrading of broilers. Although the bruises in the report were broken into two categories, operational and procurement (farm caused), most researchers seem to feel that the bruises are primarily the concern and responsibility of the processor. The report showed that highly finished birds bruise more easily. Highly pigmented birds showed fewer bruises, probably because many were masked by deeper pigmentation.

Breast blisters also ranked high as a cause for undergrades. Breast blisters are closely related to conformation, stunted poultry and weight.

The percentage of bruised and un-



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CINCINNATI CLUB FESTIVITIES—Cincinnati Feed Club officers were installed at the conclusion of the group's annual golf outing held recently. Several presentations were made by the incoming and retiring chairmen. Lucian Garner (right), Quaker Oats Co., retiring chairman, was presented a silver inscribed bowl in appreciation of a second term as chairman. Alex Steel (center), Kentucky Chemical Industries, Inc., incoming chairman, was presented a king size gavel (foreground) by Mr. Garner. Looking on, seated, is Harley Aylor, John F. Young Co., who will preside as co-chairman for the coming year. Standing at left is Paul A. Butz, Cooperative Mills, Inc., who was elected a director for the coming year; and Dr. Lawrence E. Carpenter (right), Distillers Research Council, who will act as secretary-treasurer. Absent for the picture was A. J. MacGregor, Kentucky Chemical Industries, Inc., who was elected director for the coming year.

dergrade birds varied considerably among plants. Any differences among grading personnel were eliminated by statistical checks and observation of grades. The range in grade A birds was from 35% in one plant to 87% in another. Buying practices and processing procedures were listed as the major cause for differences.

Close Relationship

In repeated instances the close association among defects clearly indicated that by eliminating or reducing one defect, others will also decrease. The Maryland researchers suggest the causes of bruising poultry be studied first. They point out that there has been little or no improvement in methods or catching, transporting and unloading of poultry almost since the poultry industry began. They also feel that investigation should be made into a possible tie between breast blisters and strain of bird.

While the Maryland study showed no correlation between live weight and condemnation rate or live weight and grade, a high correlation was found between condemnation rate and yield, condemnation rate and grade, grade and yield and live weight and yield.

Georgia Investigations

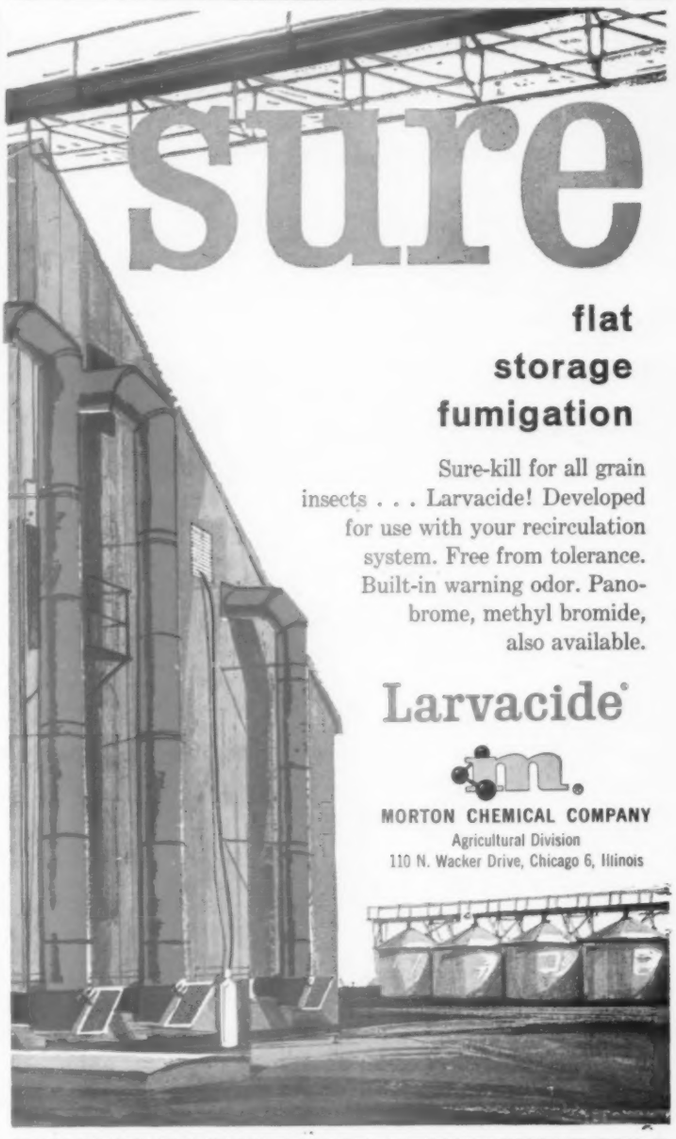
Three surveys involving 3,618,750 broilers were conducted by the University of Georgia during the period from February, 1960, through September, 1960. The results show that diseases, particularly respiratory diseases, in the presence of adverse environmental influences, directly affect the condemnation rates of broilers.

The respiratory diseases, in their order of importance, are: Chronic respiratory disease (PPLO infection), infectious bronchitis and Newcastle disease. With CRD, infectious bronchitis and/or Newcastle disease usually was concomitant.

"Vaccination procedures did not dependably control the effects of these diseases," the Georgia report says. "It behooves each grower to learn what specific diseases are responsible for his condemnation losses and to take the necessary steps to control them."

From these surveys the following conclusions were determined.

1. Respiratory diseases are the most important factor related to broiler condemnation.
2. Environmental (management) influences are related to high condemnation.
3. The combination of adverse en-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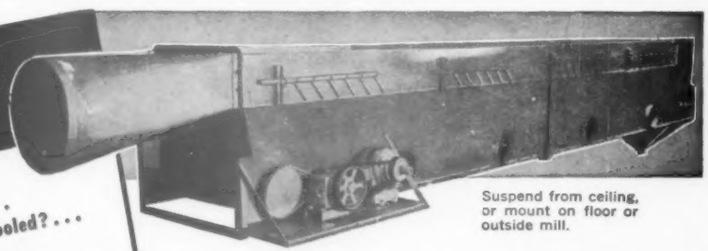

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vironmental (management and weather) conditions with the presence of disease resulted in the highest condemnation.

4. The qualities which lead to good record keeping also produce good poultry and less condemnation.

Recommendations

Georgia researchers recommended, on the basis of the surveys and other data, that growers:

1. Establish PPLO-free stock.
2. Initiate and maintain a disease prevention and control program specifically designed to control PPLO infection, infectious bronchitis and Newcastle disease.
3. When a disease appears, obtain a laboratory diagnosis so that specific control measures can be taken.
4. Observe good poultry management practices.
5. Establish and maintain complete performance records from the breeding stock through the processing plant so that sources of problems can be pinpointed and corrective measures taken.

The Georgia Field Study of Broiler Condemnation Losses was conducted by W. E. Clarke, John Kimsey, Dank Morris and Dr. S. C. Schmittle, head of the university's poultry disease research.

CELEBRATE 20TH ANNIVERSARY —Alabama Flour Mills, Decatur, Ala., celebrated its 20th anniversary recently. Photo shows John Patterson, Alabama governor; Iva Kate Hall, 4-H dairy maid, and Claude I. Carter, left, vice president of Nebraska Consolidated Mills and general manager of Alabama Flour Mills, cutting cake at the anniversary ceremony. Gov. Patterson called the company one of the state's most important industries and a major contributor to Alabama's and the South's farm and business economy. The firm's feed and grocery products are marketed in a 13 state area. Facilities are maintained in Alabama, Georgia, Tennessee and Mississippi.

Price Hike Announced

NEW YORK—Eastman Chemical Products, Inc., subsidiary of Eastman Kodak Co., has announced an increase in the price of Tecmangam brand of manganese sulfate. In the new schedule, the base price for a 30 ton car delivered east of the Mississippi River is $85 per ton. This is equivalent to a price of $3 per unit of manganese.

In making the announcement, Eastman Chemical Products, Inc., stated that the cost of manganese ore had increased substantially.

NEW PET FOOD FIRM

STERLING, COLO. — Ray's Pet Foods, Inc., has filed articles of incorporation listing $49,000 authorized capitalization to pack, cure, render, refine, process, package, can and deal in meat, meat products and animal foods of every nature and description. Incorporators and initial board of directors include Richard F. Neubauer, David J. Neubauer and Ray Large.

"We solved our salt problem with Carey Ev'r-Flo Salt..."

Faultless Milling Company tells why Carey Ev'r-Flo is the only salt they use.

"CAREY Ev'r-Flo is tailor made for our automatic system." Paul Blodget, Vice President of the Faultless Milling Company, was speaking. We had asked why Faultless uses CAREY Ev'r-Flo Salt.

"In 1957 when we moved into our new blending tower in Springfield, Illinois, we became fully automated and completely bulk. We have forty-nine bulk bins operated from a completely automatic panel board. We rely on complete flowability from the bins, for if any ingredient stops flowing, our mixing process is shut down. Frankly, we cannot afford this.

"When we first started this new automated plant, we had one bin which gave us trouble. It was salt. We tried many varieties of mixing salt, but none of them did the job completely. Then we bought our first carload of CAREY Ev'r-Flo Salt.

"In any kind of weather, under all conditions, we have found CAREY Ev'r-Flo does a superb job. In fact, we haven't had a work stoppage due to a hang-up in the salt bin since we began using Ev'r-Flo. We believe CAREY Ev'r-Flo is made for our automatic system, and we're sold on its flowability."

Perhaps CAREY Ev'r-Flo Salt is made for your mixing operation, too. See your CAREY salesman, and ask him to demonstrate Ev'r-Flo flowability in your plant. And ask him, too, about new CAREY Flo-Min Salt — a trace mineralized salt designed for feed mixers, and available in three formulas: Poultry, Swine, and Livestock. Each balances recommended trace minerals in a free-flowing salt ideal for mixing of complete formula feeds.

Prices, CAREY Ev'r-Flo Salt (F.O.B. Hutchinson); bulk, $9.80 per ton; 100 lb. bags, 76c each or $15.20 per ton; 50 lb. bags, 50c each or $20.00 per ton. Call your nearest Carey Sales Office or your Carey representative for freight rates and delivered prices.

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"What do I mean by compete? Well, to stay in this business, you've got to produce as economical as possible. We're feeding for profit . . . and Stilbosol in our ration helps us make that profit.

"We're feeding 100 head right now. 92 heifers and 8 steers. From our past records, we figure we get about ½ pound extra daily gain when we feed Stilbosol. That's for both steers and heifers.

"We feed to low choice and choice, and our cattle never have any trouble making those grades. We usually market our steers when they weigh 950 to 1000 pounds and our heifers when they reach 850 to 900 pounds.

"Seems like competition is getting tougher in everything you do. Last year I won the 5-Acre Corn Contest with an average of 141 bushels per acre. This year I had 153 bushels per acre and came in fifth," Stanley smiled.

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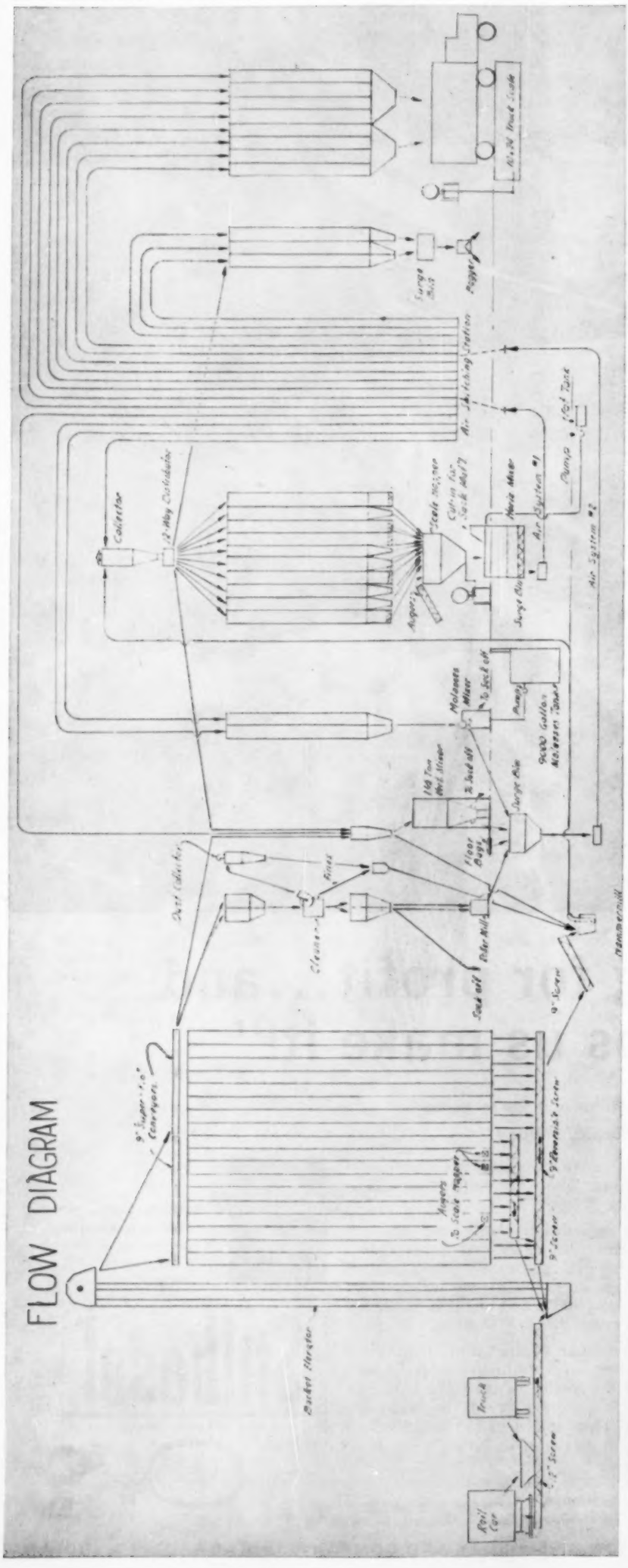
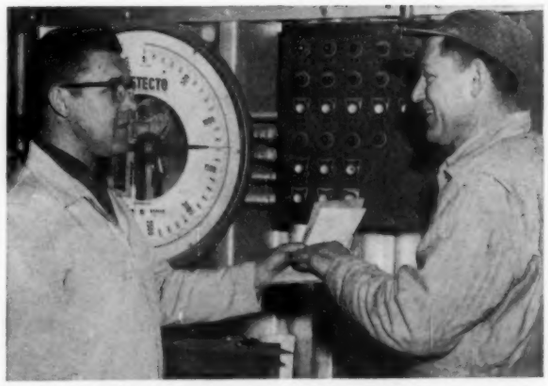




Henry Dick (left), manager, discusses the mixing operation with J. Suderman at the semi-automatic batching and mixing control station.

New Feed Mill in Canada Features . . .

- **All-steel construction.**
- **Grinding of grain directly from storage bins.**
- **Pneumatic handling.**
- **Semi-automatic batching.**

By Roger Berglund
Feedstuffs Managing Editor

The first all-steel feed mill in Canada . . . grinding of grain directly from storage bins . . . pneumatic handling to prevent contamination and provide flexibility of operation . . . semi-automatic proportioning and mixing . . . production of 100 tons per eight-hour shift with less than one man-hour of labor per ton.

These are some of the features of a relatively new feed plant in British Columbia, Canada.

The mill is that of the East Chilliwack Fruit Growers Co-operative Assn. at Chilliwack, B.C., 50 miles east of Vancouver. The modern mill, opened in late 1960, replaced a milling operation which had become inadequate for the growing feed operations of the 500-member cooperative, one of the larger co-ops in British Columbia.

The plant turns out poultry and dairy feeds for farmers in the Chilliwack area. The East Chilliwack co-op was started in 1947 to market fruits. But the feed and farm supply business became relatively more important, and today feed manufacture and distribution are a principal function of the business.

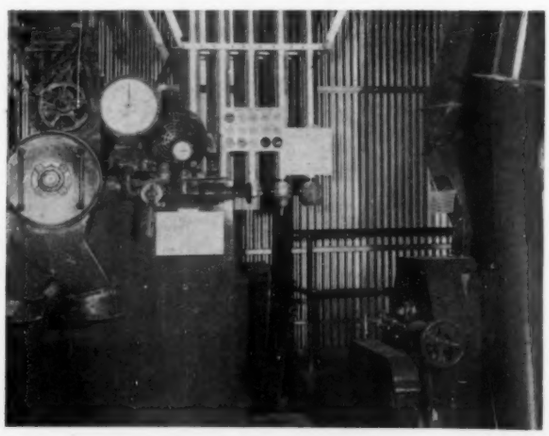
Other Facilities

The new mill is part of a $220,000 project which also includes a new farm supply store, offices and steel warehouse. The feed plant is an all-new structure, with some new equipment and some existing machinery incorporated into the facilities.

Henry Dick is general manager of the cooperative's operation, including the feed manufacturing operation. P. H. Walde is president.

The new feed plant was designed and built by Larson & Epp Industries, Ltd., of Vancouver. The principals in this business are Forrest Larson of Vancouver, Wash., and John Epp of Vancouver, B.C.

The mill facilities, said Mr. Dick, make for a versatile, efficient operation, and capacity has been more than doubled, with no additional manpower, in comparison with the old feed operation. It is a one-floor mill, with everything directed and controlled from the compact work floor. All operations are



The main air switching station, with flexible tubing to connect to the air lines leading to various bins, is in the center of this picture. On the left is the Wenger molasses mixer, and on the right is the Ross roller mill.

The new all-steel feed mill and other facilities of the East Chilliwack Fruit Growers Cooperative Assn. at Chilliwack, B.C. The mill, with its square steel tanks, may be seen on the left in this photo. To the right of the plant are the steel warehouse and store and offices.

handled in sight of the mixer man, who directs the entire milling process.

The present facilities, the manager said, meet present needs, and also are capable of providing expanded output. At present feeds are not pelleted, but provision has been made for the addition of pelleting facilities if desired later.

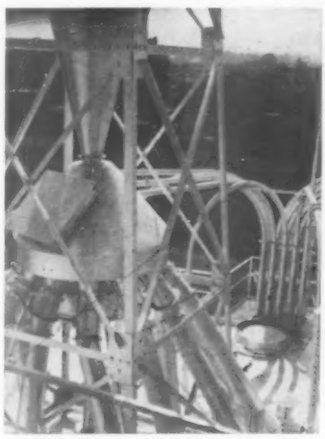
Two Pneumatic Systems

The two pneumatic systems, Mr. Dick indicated, provide flexibility of operation. He also points to elimination of contamination as a major feature of the facilities. The mill flow after grinding is entirely pneumatic and gravity, with no mechanical conveying.

The mill structure includes Butler square tanks and a Butler building. Also, there is an all-steel Butler warehouse building which is 60 by 120 ft., providing storage space for up to 1,300 tons.

Some 60% of the mill's output goes out in bags and 40% in bulk. There are eight 12-ton bins over a truck scale for bulk load-out. Bagged feeds are trucked into the warehouse after manufacture.

There are two high-pressure, positive pressure pneumatic systems for in-plant handling. One is the main mixer system, which transfers mixed feed from the batch mixing system to bagging, bulk load-out and other bins. The other is a multiple-use system, which moves materials from a special vertical mixer, or molasses mixer, or roller mill or a floor dump.



This picture taken atop the mill shows the hammermill collector, the distributor and some of the piping coming up from the air switching station.

Henry Dick, general manager, at his desk in the new office.

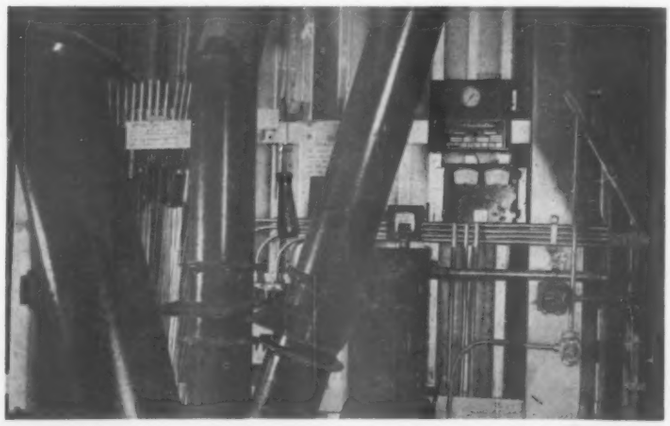
Bin Space

Storage and work bins in the plant include 18 50-ton bins for grain and soft ingredients, 10 mixing bins holding 12 tons each, two molassesizing bins, three bagging bins, one special bin, two grain cleaning bins and eight bulk load-out bins.

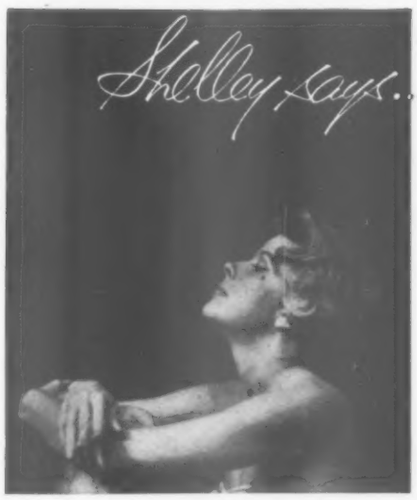
The work floor is a 24 by 32 ft. area. The large storage bins are along two sides of the plant structure and form two sides of the mill area. The warehouse is on the third side, and a steel lean-to building forms the fourth side.

The all-steel plant has worked out well from the standpoint of economy and flexibility of construction of this

(Turn to page 68)



On the right in this photo are the controls for the master-slave hammermill grinding system. On the left is the remote control station for the overhead drag conveyors which distribute materials into the storage tanks.



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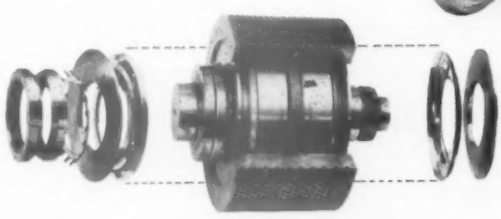
These 35c metal safety seals eliminate leather and felt seals and, of course, will not leak, rot, dry out, crack or break as ordinary seals will. The seals seat in a metal-to-metal bond that gives positive bearing protection.



Cutaway view of Landers Dimple-Faced roller, model LM 66 WFJ

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EFFECTIVENESS AGAINST MIXED INFECTIONS

Ever since AMPROL moved out of the Merck research laboratories and into the field, the broiler industry has been watching the results carefully to measure the over-all efficacy of this unique coccidiostat.

Results of this experience... involving hundreds of millions of birds... prove that AMPROL is more than fulfilling its promise as the coccidiostat broiler growers have been waiting for!

With a chemical structure completely unlike that of any other coccidiostat, AMPROL literally "starves" coccidia to death by depriving them of the thiamine they need to live. It works effectively against important coccidial species... especially against the killer types, Eimeria tenella and E. necatrix. AMPROL gives unequalled performance against single or mixed infections. Furthermore, in 19 months of use, coccidia have not shown any resistance to AMPROL!

Here are two other MERCK products for

To fight disease and stress setbacks NEW-FORMULA **FLOXAID®**

(highly-soluble, antibiotic-vitamin drinking-water booster)

IN WATER

- **Provides a broad spectrum of antibiotic activity** ... with both penicillin *and* streptomycin
- **Contains 9 important vitamins,** including K, E and B_6, to help protect health and promote normal growth

can deliver all 4

NO EVIDENCE OF COCCIDIAL RESISTANCE

TOP FEED EFFICIENCY AND WEIGHT GAINS

High condemnation rates ...a $24,000,000-a-year loss!

Two million dollars every month! That's what broiler growers are losing because of on-the-line condemnations. And the No. 1 cause of these rejects is respiratory infections, usually triggered by STRESS conditions.

Another common ... and costly ... stress is coccidiosis. That is why Merck is spearheading a POSITIVE PROGRAM FOR BROILER HEALTH with AMPROL ... to fight this major stress of coxy.

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To help get birds off to a fast, healthy start
the best antibiotic combination ...

PRO-STREP®
(penicillin and streptomycin)

IN FEED

- **Gives top protection against disease setbacks** *especially during the critical first few weeks*
- **Helps prevent early mortality** due to organisms sensitive to penicillin and streptomycin
- **Helps improve weight gains and feed efficiency**

type of mill, Mr. Dick said, and it also has afforded insurance savings.

Mill Flow

Incoming materials are unloaded by power shovel or from hopper cars and are moved by screw conveyor to a bucket elevator. The grains and ingredients go through drag conveyors for distribution into any of the 18 50-ton storage tanks alongside the mill area. This elevating and distribution system also may be used to send materials into the cleaning or other bins.

Grains are ground directly from the storage bins, using a remotely controlled variable speed drive system to move the grains to the Bryant hammermill. Three screw conveyors at right angles to each other, operating in a master-slave system, are used.

The ground materials are blown to a collector over the working bins and are distributed through a Hayes & Stolz turnhead into the bins.

Three of the large storage bins have Bazooka augers for feeding soft stock directly to the scale hopper.

Also, materials to be mixed may be moved by one of the pneumatic systems to the hammermill collector, through the turnhead and into the work bins.

The plant includes a 1-ton vertical mixer which is used to make special mixes and premixes. Material from this mixer may be bagged off or dropped into a surge bin and then into the multiple-use pneumatic system for transfer to the mixing or other bins. Bagged ingredients also may be dumped into this pneumatic system for movement to working bins.

For both pneumatic systems there is an air switching station, where the operator, using flexible tubing, chooses manually where materials are to go. This distribution method, said Mr. Dick, is handled rapidly, using quick disconnect couplings.

Batching and Mixing

For batching, five of the mixing bins are equipped with screw feeders, and five have manual butterfly gates. Also, as noted above, Bazooka augers move materials to the scale hopper directly from three of the storage tanks.

The mixing operator uses a semi-automatic push-button batching panel, observing a scale dial, to proportion the bulk ingredients. Also, some bagged materials may be cut into the mixer. Liquids, including fat and fish oils, are stored in tanks in the basement and are sprayed onto the feed in the batch mixer.

From the scale hopper, ingredients drop into a 2-ton Hayes & Stolz horizontal mixer. This is a mixer-surge bin combination. From a screw on the surge bin, the mixed feed goes into the positive pressure pneumatic system which serves the main mixing operation. The operator controls the distribution of the mixed feed at the air switching station, directing the feed to the bulk load-out bins, or bagging bins, or overhead mixing bins (in the case of premixes) or the molasses mixing bins.

Direction of material into any of some 25 bins is handled at the air switching station.

Packaging is done on a Richardson G-38 automatic bagging scale. For molasses mixing, a Wenger molasses mixer is used.

Other facilities in the mill include a Crippen cleaner, served by the two cleaning bins mentioned above, and a Ross 12 x 30 roller mill for rolling grain. The rolled grain is moved by the multiple-use pneumatic system to the bagging bins or the mixing bins. The molasses feed may be sacked off directly from the mixer or go into the pneumatic system for transfer to other bins.

For bulk load-out, there is a truck scale under the eight bulk bins which are part of the mill structure. The scale dial is equipped with a printer to show weights of loads.

The feed business of the East Chilliwack association has continued to grow over the relatively short period of its operation, and with the new facility, Mr. Dick said he looks for more efficient operations and further growth.

Spencer Kellogg Names Corn Milling Manager

KANSAS CITY—Spencer Kellogg & Sons, Inc., has named E. I. Schumm manager of its corn milling division, according to announcement by Thomas W. Staley, president of the division.

Mr. Schumm joined the Spencer Kellogg Kansas City division in January, 1960, after more than a decade of experience in various phases of the dry process corn milling business, and has been serving as sales manager.

Prior to entering the corn milling field, Mr. Schumm held management positions in the baking industry.

Joseph A. Cooper, division executive vice president, said that with relocation of offices from the mill plant to a new headquarters office building at Kansas City, there is now floor space available for additional milling expansion.

Recent improvements include installation of modern equipment for the processing of high quality corn ingredients.

The corn milling division degerms and converts yellow or white corn into brewers adjuncts, meal, flour, industrial products, crude corn oil and feed ingredients.

"Our BROWER MIXER gave such good service for 17 years we bought a new, larger one."

Says Robert W. Beste
St. Charles Elevator Co., Inc., St. Charles, Missouri

"Our first Brower Mixer was purchased 17 years ago and has given such good service we bought a new, larger one. We've never had any service problems and the cost of operation is practically nil."

BROWER *Whirlwind* **MIXER**

Exclusive Brower action WHIRLS the ingredients instead of just stirring or tumbling them . . . produces the most thorough mix you can get. Every sack has the same even mixture. Dependability, fast mixing action, and low cost operation make Brower the World's Largest Selling Mixer!

FAST and ECONOMICAL — a perfect blend in about 10 minutes at a power cost of only 3c to 5c a ton. Five sizes — 700, 1200, 2000, 3000 and 4000 pounds-per-batch mixing capacities. Above-floor and below-floor models. Heavy, welded construction — built for years of trouble-free service.

World's Largest Selling Mixer

Write for FREE CATALOG and EASY PAYMENT PLAN

BROWER MFG. CO., 402 N. 3rd, Quincy, Ill.

BROWER "Whirlwind" mixing paddle at top WHIRLS ingredients for thorough, even mixture.

All-steel grill floor over hopper. All feed remaining at bottom of conveyor sleeve easily and quickly removed.

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HUBBARD

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SUNSHINE-BOOSTER

HUBBARD Sunshine-Booster dealers now get the benefit of the research and experience of *both* Hubbard and Archer. It's an unbeatable selling combination. Get the facts on a franchise for *your* community. Write today for complete details.

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Survey Shows Need For NBC Programs, Says Group's Head

RICHMOND, VA.—Research into efforts of processors to create additional demand for broilers as well as the present market situation point up a greater need for the National Broiler Council's programs of research, merchandising, advertising and consumer education than ever before.

This is the contention of Joe Frank Sanderson, NBC president.

Mr. Sanderson made the statement relative to releasing a study by the council's research department entitled, "What Are Processors Doing to Create Additional Demand for Chicken?"

Dr. Robert J. Krueger, NBC's director of research, who conducted the project, noted that the study includes data revealing the scope of processors' efforts to create additional demand through their 1960 expenditures for media advertising and point-of-purchase and display materials for retailers. Included in the study were 40 processors representing 17% of the 1960 U.S. broiler slaughter.

The study showed that processor expenditures to create additional demand were only .06% or $1 for each $1,684 of gross sales for "pre-store" promotions in newspapers, radio, poultry trade journals, retail trade journals, television and magazines, according to Dr. Krueger. "In-store" promotional expenditures for point-of-purchase material amounted to .006% or $1 for each $14,677 of gross sales, the study showed.

Stimulating Demand

With this in mind, the following question was asked: Why are processors not doing more to create additional demand?

The study pointed out that stimulating the demand for broilers has inadvertently been left up to the processor with little help or encouragement from other industry groups. The study indicates that because of several unique factors in the marketing of broilers, the benefits from additional demand are not confined to the processors but shared by all segments of the industry.

These factors, as cited by the study, are:

(1) Nearly one half of all broilers are marketed over 400 miles from where they are processed.

(2) Eighty per cent of the broilers being sold by processors are fresh whole birds.

(3) Only 13% of the processors are doing consumer packaging of broilers.

(4) Over 50% of the broilers are going through jobbers and brokers, while only 31% are being sold directly to retailers.

(5) The average sales force per processing plant is one and one third full time people and one and one third part time people.

(6) Processors do relatively little personal sales work. One half of the processors estimated that 90% of their sales effort is by telephone.

The study's summary concluded: "These factors make it impractical for most individual processors to carry on an effective demand creation program. What is impractical for processors individually is practical for the industry as a whole."

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IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR FOOTED ANIMALS

Ontario Feed Exempt From Sales Tax

TORONTO—Feeds, fertilizer, agricultural products and some drugs are among items that will be exempt or subject to rebate when an Ontario provincial 3% sales tax becomes effective in September.

A number of other heavily used items such as sanitizing materials and bactericides are not listed as being exempt. However, these items may be classified exempt under a "tangible personal property" provision, as defined by the treasurer.

The act defines tangible personal property as meaning "personal property that can be seen, weighed, felt or touched, or that is in any other way perceptible to the senses."

FEED MAN DIES

DICKINSON CENTER, N.Y. — Arthur D. Erwin, 78, retired feed man, died here recently.

SWINE

(Continued from page 44)

pens, each holding 20 pigs. The pigs were started in the small pen and changed to the next size as they grew. As soon as the first move was made another batch of 20 weanling pigs moved in to take their place in the first pen. This system has been used some in the U.S. but is not too much in favor because of the labor required in constantly moving pigs in 28-day cycles.

The moving schedule of 28 days was based on a weight criteria of weaning to 44, 45-77, 78-119, 120-165 and 166-220 lb. Weaning was at four weeks and 20 lb. Excluding the outside dunging alley, the floor space per pig was 4.9, 5.7, 7.5, 8.4 and 9.6, respectively, for the above weights.

The size of the outside dunging alleys was made according to the size and kind of equipment that was used in the cleaning process.

These buildings were extremely well built and insulated. The body heat of the pigs was used to help keep the building warm during cold weather. The openings to the outside dunging alley were a series of two baffled doors, thus reducing heat loss through the doors to a minimum.

"Hothouse" System

Without a doubt the most unique system of finishing pigs was observed on the farm of Mr. James Jordon in the vicinity of Belfast, Ireland. His system is referred to as the "hothouse" system and rightly so. You would really to have to visit this operation to believe this brief description. Mr. Jordon's operation is strictly based on finishing feeder pigs for a quality market. His volume is about 19,000 hogs a year with a death loss of about 1½-2%, which is a noteworthy accomplishment in itself.

This system is based on a closet-like confinement of the pigs in an atmosphere of almost 100% humidity

Someone's not using Ray Ewing . . .

Poultry panicky? Temperature extremes, crowding, vaccinations and diseases will cause lots of Chicken Littles to think the sky is falling. This emotional stress can be eased by Serpasil®, the revolutionary new feed additive.

Serpasil is the tranquieter that helps to pacify poultry, improve feed efficiency, promote egg production, minimize mortality and cannibalism. See your Ray Ewing representative—*before* the birds get into a foul mood.

Ray Ewing

you can always rely on Ray Ewing

THE RAY EWING COMPANY
Authorized Distributor of SERPASIL® Premix (reserpine premix CIBA)
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NEVER CAKES OR HARDENS-

Even in the Dampest Weather

HARDY FLO-MATIC SALT

the free-flowing salt for easier, more uniform feed mixing

Even the highest humidity can't interfere with the free and easy flow of Hardy Flo-Matic Salt. It's treated with calcium stearate to prevent caking, hardening or lump formation in any and all kinds of weather.

▶ This means that you can produce a better, more uniform feed mixture, with even distribution of salt through the entire mix, whether you have the new push-button or standard mixers. There's no chance of clogged mechanism . . . no production down-time . . . no irregular batches.

▶ Hardy Flo-Matic Salt is packed in sturdy, moisture protected polyethylene-lined bags, 50 or 100 pounds or shipped in bulk in covered hopper or box-cars . . . to insure delivery to you exactly as prepared.

▶ Write, wire or phone for additional information and delivered prices on Hardy Flo-Matic, the salt that keeps flowing in any kind of weather.

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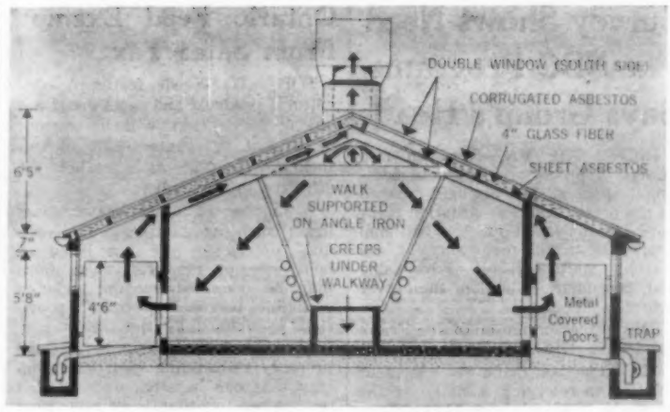

FIGURE 5—Diagrammatic cross section of British Oil & Cake Mills, Ltd., farrowing house, Hobbs Cross, England. (Courtesy of Hogcast, special report No. 17, January, 1961.)

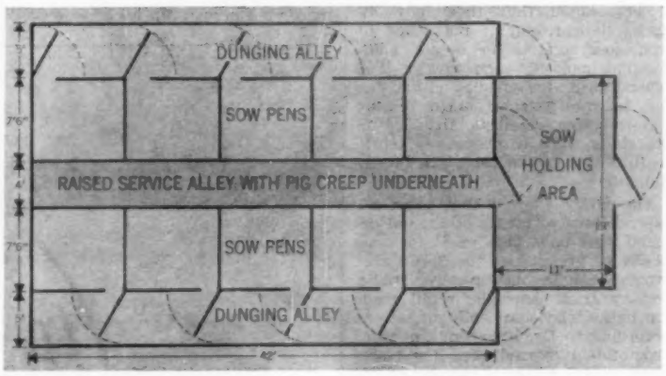

FIGURE 6—Floor plan of British Oil & Cake Mills, Ltd., farrowing house at Hobbs Cross, England. (Courtesy of Hogcast, special report No. 17, January, 1961.)

with a temperature range of 80-85° F. Each pen is completely separated from the other pens by a solid wall from floor to ceiling and the front of each pen is closed by a solid door. The only source of ventilation is a small crack under each door and a narrow slit above the window in the rear of each pen.

It is generally considered that a temperature range of 50-65° F. and 10 cu. ft. of air per minute per 100 lb. of live weight is optimum for growing-finishing swine. A calculation of floor space shows a total of 4½ ft. per hog.

The pigs are fed a grain mixture directly on the floor, no feeders. The watering cups are hooked to a large whey tank. The feeding regime is a limited amount of grain and all the whey the pigs can drink four times a day.

The almost 100% humidity, high environmental temperature and lack of ventilation coupled with such a high ratio of pigs to floor space would suggest an impossible situation. The success of Mr. Jordon's system is difficult to explain on the basis of our present concepts of optimum environmental and management criteria. You have to see it to believe it.

Design of farrowing facilities was of three basic types: Pen, crate and New Zealand ring (similar to the Nutrena "Pigloo"). One unique and very workable design was used by the British Oil & Cake Mills, Ltd., in England (see Figures 5 and 6). The "inside-outside" dunging alleys, the elevated service alley housing the baby pig area and the positive type ventilating system are features of this design. Notice the flow of air and insulation of the building. This was one of the best designed and constructed farrowing houses seen on the entire trip.

As a whole, the farrowing facilities were characterized by being extremely well planned, comfortable and clean. The diligent and careful management of the lactating sows was manifested in the large litters weaned and in the vigorous and healthy condition of each individual pig.

In summary, one can say that the European swine centers visited were characterized by excellent management, a high quality product, a concentrated system of production centered around concrete and good housing, and the pride and confidence that come from a job well done.

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...produces more gain at less cost than zinc bacitracin.

Have you filed your supplemental N. D. A. for Taomyxin in swine feeds? If not, do it now.

Kansas Grain Storage Up 40 Million Bushels

TOPEKA, KANSAS—Commercial facilities for storing grain in Kansas increased nearly 40 million bushels during the past year, according to the Kansas Crop and Livestock Reporting Service.

Storage capacity of terminals, mills, elevators, warehouses and other miscellaneous storage in the state totaled over 780 million bushels May 15, an increase of 5% from a year ago. These facilities had 541 million bushels of grain on hand, leaving 239 million bushels of storage available for new crop grains.

Although the expansion in storage facilities in the past year was less than for the previous two years, the total available space May 15 was well above the 203 million a year earlier. Commodity Credit Corp. sites, not included above, with a capacity of 45 million bushels, had 24 million bushels of grain May 15.

Since the survey date, there has been some outmovement of crop grains, principally CCC controlled. In addition, construction now underway and scheduled for completion this month will provide 20 million bushels of additional space. Another 9 million bushels of storage is planned for completion later in the year, bringing the state's total storage capacity to 809 million bushels.

The number of grain storage plants was about the same as a year ago. New unit additions were offset by plants dismantled, abandoned or destroyed by fire. Much of the increase in storage capacity was accomplished by attaching flat storage or steel bins to existing structures.

Included in the total were 33 terminals and 1,837 interior mills, elevators, warehouses, merchant mills, oilseed crushers and temporary facilities such as at former air bases and army camps.

Sedgwick County with 98 million bushels had the largest grain storage capacity of any county in the state. Shawnee County continued in second place with 71 million bushels, followed by Saline, 61 million; Reno, 57 million, and Wyandotte County with 52 million bushels of storage.

These five counties had over two fifths of the total Kansas bulk grain storage capacity. Counties with the greatest increases over a year ago were Shawnee, Reno, Atchison and Sumner.

Marketing Articles

RICHMOND, VA. — The National Broiler Council has released to its membership a bibliography of marketing articles which have appeared in trade journals of the broiler and retail food industries.

"These articles are authored by experts in their respective fields and are one of the most concentrated and complete sources of recent knowledge available to NBC members for use in their individual operations," noted Dr. Robert J. Krueger, NBC director of research, who compiled the bibliography.

"The topics are concerned with marketing and directly related subjects including advertising, consumer preferences, merchandising, packaging and 11 other categories which are covered by the 136 articles found in the bibliography," said Dr. Krueger.

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Use FEEDSTUFFS Want Ads for RESULTS

Clemson Now Offering MS Degree in Poultry

CLEMSON, S.C. — Clemson Agricultural College is now offering a graduate program leading to the M.S. degree in poultry, according to Dr. B. D. Barnett, head of the Clemson poultry department.

"With the increasing complexity of the industry, the need for well trained men in this field has become very great," said Dr. Barnett.

"At Clemson our greatest need for furthering this work is financial assistance," he said. "This financial aid can take the form of graduate assistantships or grants-in-aid for research work.

"We believe that adequate financial assistance will permit us to attract outstanding students for further service to the poultry industry and industries related thereto," Dr. Barnett stated.

Don't Mix Without CK Econolass

THE ECONOMICAL DRY BLACKSTRAP MOLASSES INGREDIENT

CK Processing Company
Muscatine, Iowa — PH AM 3-3096

New lightweight Power Shovel moves grain at 100 tons per hour— Unloads a boxcar of grain in half an hour— *all at the touch of a button!*

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Costs less to buy . . . works harder per dollar than any other power shovel

Just name the job . . . emptying trucks, unloading cars, clearing bins and storage, loading conveyors . . . this new kind of power shovel handles all of them quickly and safely.

The new Stohr Roto Shovel puts a giant pulling power of 1300 pounds right at your fingertips, thanks to its radically different push-button control. Just push the button and it starts . . . release it and the "dead-man" switch stops shovel travel instantly.

One man handles the entire operation safely and easily without extra help or bulky equipment . . . . no heavy counterweights, no need to completely unreel the cable every trip. Start anywhere you like.

Despite its rugged power, the Roto Shovel is so compact and light that you wheel it from job to job . . . even carry it in the trunk of your car, ready to work in seconds.

See how much more there is in Stohr for you! Mail this coupon today.

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Gentlemen:
Please send me complete information on the new STOHR ROTO SHOVEL.

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A NEW SUMMER MARKET FOR FEED CREATED BY AUREOMYCIN

Dramatic results have been obtained in the control of insect-borne anaplasmosis by Aureomycin in formula feeds. This has opened up a new summer market for feed manufacturers serving Southern areas . . . and may be expanded still further.

Anaplasmosis – a disease which reached near-epidemic proportions in 1958 and 1959—*can be controlled with AUREOMYCIN® in good formula feeds.* That's the report coming from all areas in the Southland where this wide-spectrum antibiotic has been given to cattle.

The effectiveness of AUREOMYCIN has, in fact, *created* a new summer market for a number of feed companies who have formulated special feeds containing AUREOMYCIN to combat anaplasmosis.

Since it appears that anaplasmosis may be spreading to other areas (it has been diagnosed in 32 states), more feed companies may seek the opportunity of opening up a new market by serving their customers with similar feeds.

What is anaplasmosis?

Anaplasmosis is a disease caused by microscopic parasites that live in red blood cells. It is spread by ticks, mosquitoes and horse flies which bite infected animals and carry the disease to healthy animals. It also can be spread by non-sterilized vaccinating needles and dehorning instruments. Anaplasmosis occurs in late summer and fall and may be found almost anywhere cattle are raised. It is most prevalent in warmer areas: in the Gulf coast states, lower plain states and California.

Anaplasmosis is characterized by anemia, fever, loss of appetite, loss of weight and yellow membranes. Young calves are susceptible, but rarely show symptoms even though they undergo the disease. Yearling cattle show symptoms but rarely die. After cattle are two to three years of age or older, they show severe symptoms and up to 50% of affected cattle may die. Recovered cattle remain carriers of the disease but are immune. Even though the recovered cattle are immune, they should not be left in the herd but should be disposed of – as they may be a hazard to the remaining susceptible cattle.

How to control anaplasmosis

Diagnosis and treatment of anaplasmosis should be left up to a veterinarian. If anaplasmosis is suspected, a veterinarian should be called promptly since it is essential to apply treatment early in the course of the disease.

The *one* best way to control anaplasmosis is to *prevent* it by (1) insect control, and (2) use of good formula feeds containing AUREOMYCIN. Insect control can be achieved by spraying or dipping cattle at frequent intervals with insecticides. AUREOMYCIN can be fed in a complete feed or in a pasture supplement. These feeds should be formulated so that the daily intake per animal is 0.5 milligrams of AUREOMYCIN per pound of body weight. When your feeds provide this recommended level, your feed tags can carry a disease claim for the prevention of anaplasmosis.

Cyanamid promotes formula feeds for anaplasmosis

The advertisement on the opposite page will appear during the summer months in areas where anaplasmosis is most prevalent. This advertisement promotes the use of formula feeds containing AUREOMYCIN—and describes an experiment conducted at the University of Oklahoma in which the effectiveness of AUREOMYCIN was convincingly shown.

Feed manufacturers who may be interested in providing formula feeds for the control of anaplasmosis are invited to get in touch with their Cyanamid Representative who will be glad to furnish additional information. American Cyanamid Company, Agricultural Division, New York 20, N. Y.

®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.

THERE'S ONLY ONE BEST WAY TO BEAT ANAPLASMOSIS

And that's by preventing it with good formula feeds containing Aureomycin. Many southern cattlemen have done just that, and saved thousands of dollars.

Nothing has proved as effective against anaplasmosis as AUREOMYCIN®! This has been shown in three successive years, when AUREOMYCIN gave exceptionally fine results in preventing and controlling this costly, insect-borne disease in many southern areas.

Says one report: "Around 15,000 head of cattle were fed AUREOMYCIN in Louisiana, Arkansas and Mississippi in 1958 *and less than 1% were affected with anaplasmosis.*" In 1959 and 1960 thousands of cattle were given AUREOMYCIN in the anaplasmosis season with equally good results.

Aureomycin proved effective

The exceptional effectiveness of AUREOMYCIN in controlling anaplasmosis was shown in a trial conducted at the Oklahoma Agricultural Experiment Station in cooperation with the School of Veterinary Medicine. Fifteen yearling steers were inoculated with anaplasmosis-infected blood. They were then divided into 3 groups of 5 each and placed in special pens for observation.

Starting one week after the inoculation and continuing for 60 days, one of these groups (known as the "control" group) was fed a concentrate *without* AUREOMYCIN plus free choice of prairie hay. The other two groups received the same ration *with* the addition of AUREOMYCIN to the concentrate at the levels shown in the table. Note in the chart below that *none of the steers fed AUREOMYCIN became infected with anaplasmosis, while all of the animals not receiving AUREOMYCIN did.*

Following the 60-day feeding period, the animals were removed from the pens and placed on pasture for an additional 60 days.

At the end of the trial, 120 days after the experiment began and 60 days after the feeding of AUREOMYCIN was discontinued, blood samples were taken from the 10 steers fed AUREOMYCIN, and injected into 10 anaplasmosis-susceptible calves. *None of the 10 anaplasmosis-susceptible calves was infected by the blood of the 10 steers fed AUREOMYCIN.*

What one rancher reports

Says Mr. George Shepherd, manager Milliken Plantation, Lake Providence, La.: "Prior to the introduction of feeds containing AUREOMYCIN for our 1300-head herd of Aberdeen Angus cattle, our death losses from anaplasmosis ran about 2%. In addition to the deaths caused by anaplasmosis, approximately 3% of our brood cows aborted as a result of the sickness. In dollars and cents this would run about $400 to $500 per 100 head of cattle. AUREOMYCIN, I am convinced, is responsible for cutting these losses practically to zero."

Feeding AUREOMYCIN for control of anaplasmosis (120-day trial)

	without AUREOMYCIN	with AUREOMYCIN	
	Control Group 1	Treated Group 2 - 1 mg. per lb. body wt. daily	Treated Group 3 0.5 mg. per lb. body wt. daily
Number animals	5	5	5
Number inoculated with anaplasmosis carrier blood	5	5	5
Number becoming infected with anaplasmosis	5	0	0

Talk to your feed manufacturer

Many feed companies make special feeds containing AUREOMYCIN for control of anaplasmosis. Get in touch with *your* feed manufacturer or feed dealer. American Cyanamid Company, Agricultural Division, New York 20, N. Y. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow directions for use.

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

Cattlemen throughout Southern areas will read this advertisement on formula feeds for the control of anaplasmosis. It will appear in Gulf Coast Cattleman and Florida Cattleman in June, July and August.

PENB Launches Egg Promotion 'Booster'

CHICAGO—Looking ahead to an exceptionally large egg supply during the summer and early fall, the Poultry & Egg National Board, backed by Secretary Freeman and the USDA, has expanded its egg promotional activities into an aggressive "booster" program to move more eggs from farms to family tables.

Telegrams, followed by letters, were sent to major food organizations requesting that they urge their members to step-up egg promotional programs and to gain the assistance of PENB's attention-getting sales aids.

Contact points were: The National Association of Retail Grocers, National Association of Food Chains, Super Market Institute, National Industrial Stores Assn., Associated Food Retailers, Independent Grocers Alliance of America, Great Atlantic & Pacific Tea Co., Inc., American Hotel Assn., National Association of Retail Druggists, National Association of Chain Drug Stores, and Variety Stores Assn.

A reply from Ralph W. Burger, A&P president, said, "You can be assured of the complete support of our entire organization in the interest of producer and consumer." Equally encouraging replies are flowing in from the other organizations.

State egg association secretaries were alerted to follow-up on national efforts by contacting food outlets in their areas, and all members of the egg industry are urged to get materials, such as PENB's colorful 16-piece "Eggs for Go Power" merchandising packet, into as many stores and mass feeding establishments as possible.

Featuring an attention-getting animated egg character, the packets are available on a cost basis of $2 and may be ordered direct from PENB, 8 S. Michigan Ave., Chicago 3, Ill.

FEED INGREDIENTS WITH REAL BENEFITS!

ACTION and INTEGRITY backed by EXTENSIVE EXPERIENCE

- MC-47 (Condensed Beet Solubles)
- MC-59 (Ammoniated Condensed Beet Solubles)
- TORAFEED (Torula Yeast)
- ADY-20 (Live Yeast)
- SCHLITZ Brewers Grains & Yeast
- FEEDPHOS (Defluorinated Phosphate)
- C.F.S. (Corn Fermentation Solubles)
- CLINTON Corn Gluten Meal-Feed
- HaVeN Granite Grit
- TAPO Oyster Shell & Meal
- KELL PHOS (Colloidal Phosphate)
- AVOSET Condensed Whey Solubles and Milk Albumin Product
- MILEZYMES (Tokamine Feed Enzymes)
- Grains - Millfeeds - Grain By-Products
- Animal By-Products
- Oil Cake Meals

H. V. NOOTBAAR & Co. 3 Calif. Offices to serve you: Pasadena, 890 S. Arroyo Pkwy., MU 1-8491 · Palo Alto, 667 Cowper St., DAvenport 6-2545 · Bakersfield, P.O. Box 941, FAirview 7-2584

Winners of Northwest Feed Association Scholarships Named

MINNEAPOLIS — The names of the winners of scholarships provided by the Northwest Feed Manufacturers Assn. have been announced.

The association annually provides $2,100 in scholarships to the Institute of Agriculture, University of Minnesota, St. Paul. This is recognized as the "most signifant function of the association," R. A. Blomfield, president, pointed out. Dr. Keith McFarland, assistant dean of the College of Agriculture, said that the Northwest association's program is "without question one of our most significant for upperclass scholarships."

Winners of seven scholarships of $300 each for the 1961-62 schoool year were announced by the university. The association designates one scholarship in each of animal husbandry, dairy husbandry, poultry husbandry and agricultural business, plus three scholarships for students in undesignated areas. One of the scholarships is designated as the Harvey E. Yantis memorial scholarship, in memory of the late Harvey E. Yantis, who was editor of Feedstuffs.

The winners for 1961-62 in the four specified areas are Elvin E. Jensen, Glencoe, Minn., now a sophomore with major in agricultural business administration; Harvey W. Mohrenweiser, Mora, Minn., junior with major in dairy husbandry; David E. Schafer, Bagley, Minn., sophomore with major in animal husbandry; Norman L. Sheldon, Bagley, Minn., sophomore with major in poultry husbandry, designated as the Yantis scholarship winner.

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Because of the availability of $400 in unused Northwest association scholarship funds, two $200 non-recurring scholarships also were provided for 1961-62. These will go to Todd K. Fetsch, St. Paul, sophomore with major in dairy husbandry, and Gary A. Steen, Ortonville, Minn., sophomore with major in soils.

All of the scholarship winners have favorable scholastic averages, have been working while in college to defray expenses and have taken part in school activities.

"STEEL VAULTS" for a GRAIN BANK

BIG BINS

MASTER-CRAFTED BY COLUMBIAN

The first rule for success of any bank is confidence of depositors in the security of their funds. That's why Schneider Bros. Grain Co. of Augusta, Kansas, specified Columbian BIG BINS for their farmer-customers' grain and feed storage in their grain bank operation, inaugurated in 1960. They knew that strong, tight, weatherproof and fire-safe Columbian Steel BIG BINS would keep grain and feed safe from spoilage and damage by fire, vermin and rodents. Dana Clark Equipment Co., Inc. of Wichita planned and erected this grain bank for Schneider Brothers.

The four 24' x 24' Columbian BIG BINS were also the most economical and practical installation—sound grain banking practice. By using leased pneumatic conveying equipment for transferring grains from bin to bin or to the feed mill, the feed company did not have to invest in fixed conveyors. A single spout from the mill to one bin takes care of the feed storage problem.

For any grain or feed storage or handling requirement, it pays to consider Columbian *first*. Columbian BIG BINS and Tall Tanks go up fast and at low cost; Columbian bolted steel elevators are the tightest and strongest known. And Columbian engineering, plus approved Columbian distributor-contractors, can greatly simplify your problems of planning, budgeting, and construction.

Write today for the FREE Columbian BIG BIN and Tall Tank folders and the Columbian Elevator book. They'll show you how Columbian design and mastercrafting can give you more for your money, every time.

COLUMBIAN STEEL TANK CO.
P. O. Box 4048- R Kansas City, Mo.

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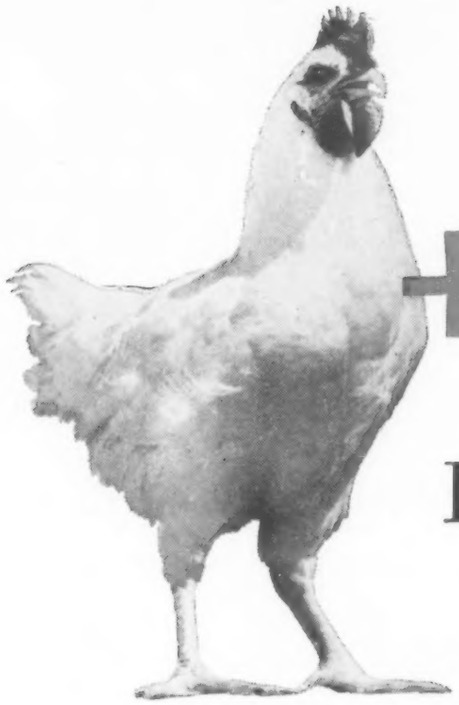
OVERALL OUTLOOK on industry developments comes to you weekly . . . while it's still news in FEEDSTUFFS



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Put more broiler in your feeds with Dawe's

Vitamelk

There's more broiler in a ton and more profit for the grower, when you fortify your starter and finisher feeds with Vitamelk Broiler. They are critical rations that require this specialized fortification to meet today's performance demands for growth rate and feed conversion.

Vitamelk Broiler, developed by Dawe's Nutrition Research and Technical Service, is a convenient, easy-to-use comprehensive fortifier. Vitamelk Broiler is a Dawe's quality-controlled premix of vitamins, antibiotics, unidentified factors and trace minerals at research-proved levels for high-efficiency broiler feed performance.

When your Vitamelk-fortified broiler feeds are judged by cost-conscious growers, they'll be rated "tops" on the basis of growth rate, feed conversion and feed cost to produce a pound of meat.

Talk broiler feed fortification with your Dawe's man, or write for more information on Vitamelk and new concepts in broiler nutrition.

Dawe's

VITAMELK PRODUCTS

There are specific Vitamelks for:

- broilers
- layers
- breeders
- turkeys
- dairy
- beef
- swine

Dawe's

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4800 South Richmond St.
Chicago 32, Illinois

World's Oldest and Largest Specialists in Feed Fortification

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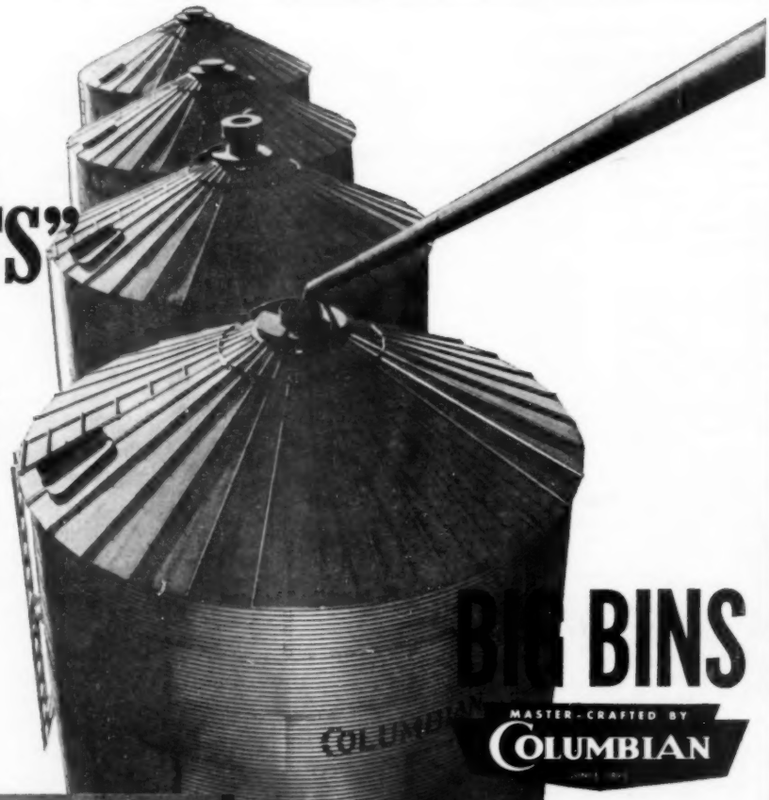

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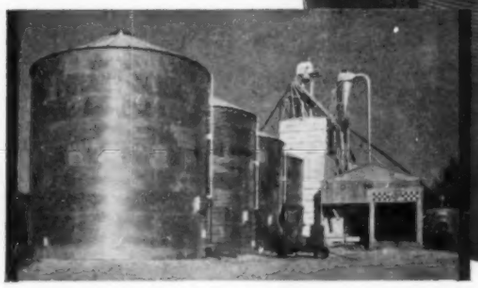

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STEEL, Master-Crafted by Columbian ... First for Lasting Strength
We do contract steel fabrication

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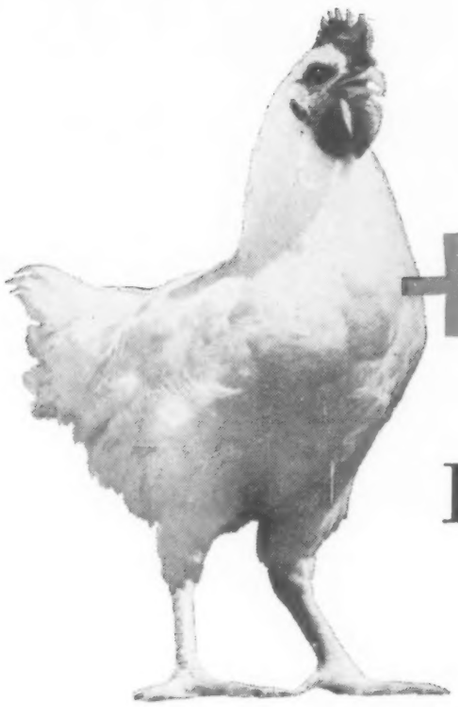

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Dawe's

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- breeders
- turkeys
- dairy
- beef
- swine

Dawe's

DAWE'S LABORATORIES, INC.
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World's Oldest and Largest Specialists in Feed Fortification

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LOW COST?
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IS THE SOLUTION
COLUMBIA SOFT PHOSPHATE?
It is the lowest cost phosphorus source acceptable for feeds . . . averages well over 9% Phosphorus . . . excellent service is offered throughout the year.
Write for information and prices.

COLUMBIA PHOSPHATE CO.
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THEN YOU NEED
Universal
You can match your operating requirements with a complete range of bucket elevators, in capacities from 50 to 3,750 cubic feet per hour to any exact height. Universal Bucket Elevators reduce expenses by increasing efficiency. Universal has the experience to help you solve special installation problems.
Whether you have a big operation like the Bahler Grain Company of Galveston, Indiana, or a smaller operation, Universal has the best answer for you.
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"CONSIGNOR" DISTRIBUTOR
UNIVERSAL "TROF-BELT" CONVEYOR
. . . Smooth rollerless design. For economically conveying feed and grain horizontally or at an incline. . . . Capacities to 3,750 cubic feet per hour in any exact length to 160 feet. . . . 4 standard non-reversible and reversible models.
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SEND FOR YOUR FREE LITERATURE TODAY!
BOX 101 CEDAR FALLS, IOWA

GRIND, MIX DEPARTMENT—The grind and mix department of the Mattoon (Ill.) Milling Co. includes three hammer mills and as many mixers. Grinding rates are corn, 15¢ per 100 lb.; oats, 20¢ per 100 lb.; cobs, 30¢ per 100 lb. and 15¢ per 100 lb. for crimping.

Illinois Mill Finds It Pays to Check Weight Gains, Costs

By Al P. Nelson
Feedstuffs Special Writer

If you drop in at the roomy showroom and office of the Mattoon (Ill.) Milling Co., you'll usually find K. C. Carlyle talking about feed costs with one or two farmers, or you'll hear him on the phone discussing the same subject with a farmer. At the same time, his partner in the business, Ed Behrend, can be found out in the trade area visiting a feeder and talking feed costs with him.

This emphasis upon specific weight gain and feed costs pays off for Mattoon Milling Co. because the firm has led other Purina dealers in the region in tonnage sales of Purina concentrates and complete feeds.

A large percentage of its tonnage is on hog and cattle feeds. For example, the firm does a large volume on cattle supplement. This feed has become a good seller in the area because Mr. Carlyle and Mr. Behrend and their staff have proven to customers that this feed will produce good gains for them at low feed cost.

The average cattle feeder likes to go by the rule of 1 lb. of supplement, plus the grain and silage factors. But the Mattoon plan calls for feeding each steer 2 lb. of supplement per day. Naturally, such a jump in supplement ration is one which must be detailed to some feeders as one which can yield greater profits.

And Mr. Carlyle and Mr. Behrend have a plan to do it. They try to get a new feeder on a 30-day trial plan for some of his steers on the 2 lb. per day plan. They also encourage him to do his own weighing. They help him keep records, so that at the end of the 30 day trial period he will have all the facts he needs to check results. Mr. Carlyle and Mr. Behrend tell a cattle feeder that if this 30 day test doesn't pan out the way they say it will—with greater gain and lower feed cost—they will buy him a new Stetson hat and also pay for the cost of the feed.

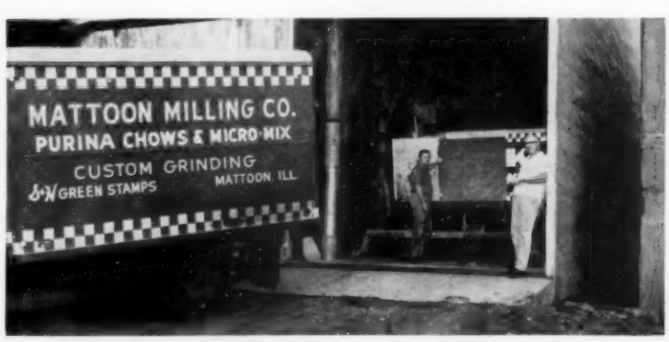
Results of Feeding Tests

What have been the results of such feeding tests?

One published 1960 test, which the Mattoon Milling Co. used in its advertising, said:

A customer fed 35 head of cattle on another feed, and each animal got 1 lb. of supplement daily, plus 5 lb. of corn, plus oat silage, free choice. On this ration the cattle gained 1.87

FEED TALK—K. C. Carlyle, partner in the Mattoon (Ill.) Milling Co., is shown at left discussing costs and weight gains with two customers. Conversation like this has paid off for the firm, which has led other Purina dealers in the region in tonnage sales of Purina concentrates and complete feeds.



SCENE AT MILL—This scene at the Mattoon (Ill.) Milling Co. shows a bulk delivery truck unloading inside, and a general delivery truck standing by for service use.

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Note: Production machinery to manufacture the Bemi-Strip feature is being installed in Bemis plants as rapidly as possible, but the feature is not yet available on the West Coast or in parts of eastern United States. The feature will be available nationally in just a few months. Ask your Bemis man for complete information.

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QUALITY FEEDING—The value of a quality feeding program is being discussed in this photo, which shows a customer, left, and Ed Behrend, Mattoon (Ill.) Milling Co. partner.

lb. a day average, with a 14.5¢ per pound of gain feed cost.

The feeder then fed the supplement sold by Mattoon Milling. This called for 2 lb. of supplement daily, plus 5 lb. of corn, plus corn silage free choice. On this ration the cattle gained 2.8 lb. daily with a feed cost of 13¢ per pound of gain.

"The records tell the story," says Mr. Carlyle. "That is the only way to sell feed. The farmer is in the business to make a profit. To sell him feed we've got to show him how he can make more profit using our feed on a plan which we recommend. We have to get the per pound feed costs down to a fraction of a penny."

Records Sell Feed

The two feed men have numerous feeding records in their files which they like to discuss with customers.

CUSTOMER STUDY — A customer studies results of a cattle feeding test that was conducted by the Mattoon (Ill.) Milling Co. The firm puts a lot of emphasis on cattle and hog feeding trials that compare its feed with other feeds.

Such records sell more feed, Mr. Carlyle says. And that is why there is so much discussion in the Mattoon salesroom about feed costs. It's good business, says Mr. Carlyle.

"A man can feed steers for the market on corn—about 18 bu. at $1—but he'll make no profit," says Mr. Carlyle. "We try to show feeders that they can still use corn and our supplement and make a good profit."

Last fall, the two partners issued a two-color direct mail folder to 500 customers in their trade area. It was four pages, and contained large size pictures of Mattoon Milling Co. mill and delivery facilities, and also pictures of the feeding operations of a couple of feeders. Copy also told of the Mattoon Milling Co. cattle feeding plan and a feeding record was detailed.

"This folder aroused a great deal of interest," says Mr. Carlyle, "and we plan to use more of them."

Demonstrations

During the winter of 1961 Mr. Carlyle and Mr. Behrend cooperated with other Purina dealers in building attendance of farmers at the Feb. 2 Funk Farm Cattle Feeding demonstration at Shirley, Ill., six miles south of Bloomington. The demonstrations covered young cattle, feedlot cattle, heavy cattle and new breeds. Feeding of silage, etc., was also covered.

"Demonstrations like this are a good idea," Mr. Carlyle says, "for they focus attention on the best gains that can be made through specific feeding plans."

Mattoon Milling Co. has cattle feeder meetings of its own a number of times during the year. It also pushes hog feeder meetings. At present, it has one of these each month. To each, it invites eight hog customers and four non-customers. The groups are small enough so that all farmers feel like entering into the question and answer period. Mr. Carlyle reports that these small meetings are working out very well.

The feed firm operates on a limited grain bank plan. However, many feeders bring in their own grain for grinding and mixing on a current basis. The firm has three mixers. They are all Kelly Duplex mixers. Two hold 3 tons and one holds 2 tons. Two Gruendlers, a 100 h.p. and a 75 h.p., are used for grinding. A 50 h.p. JayBee hammer mill is also used now and then. A Patterson molasses blender and a Delphi bulk truck complete the equipment list. The mill is operated with three employees.

Postcards Bring Sales

Regular customers are provided with government postcards which are addressed to Mattoon Milling Co. The reverse of the card contains a list of feeds, etc., sold by the firm. The farmer who has a stack of these cards can easily fill out what he needs in the way of feeds and mail it to the milling company and get relatively quick delivery.

"These handy little postals bring us a great deal of extra business," reports Mr. Carlyle.

The roomy farm store is stocked with various types of farm supplies. There are also many signs and posted pictures which relate to feeding projects and their costs. These photos and signs help to initiate discussions about feeding, says Mr. Carlyle, and often result in sales.

"You have to keep the feeding cost issue before customers all the time," he says, "so that they are willing to explore with you the facts of the program you are pushing."

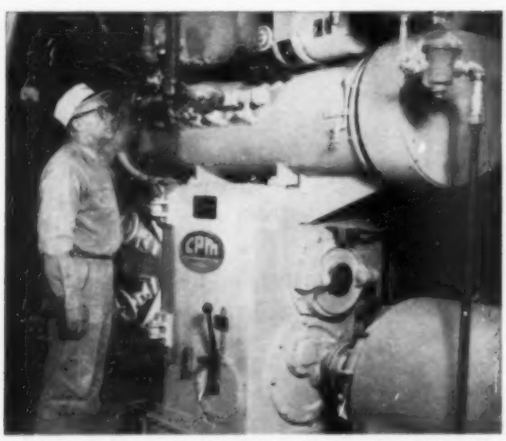
The mill puts about 12,500 tons of finished feed through the plant yearly.

Grinding rates are 15¢ per 100 lb. corn; 20¢ per 100 lb. oats; cobs, 30¢ per 100 lb. and 15¢ per 100 lb. for crimping.

Feed Production Up

HAYWARD, CAL.—Total feed production at the mills of the Hayward Poultry Producers Assn. has increased to 14,869 tons for the first four months of this year as compared with 13,828 for 1960, and 9,802 for 1959. The figures represent an increase of 5% over last year and 44% over 1959.

The number of employees has been reduced from 55 to 35 persons, with an estimated annual saving of about $100,000.



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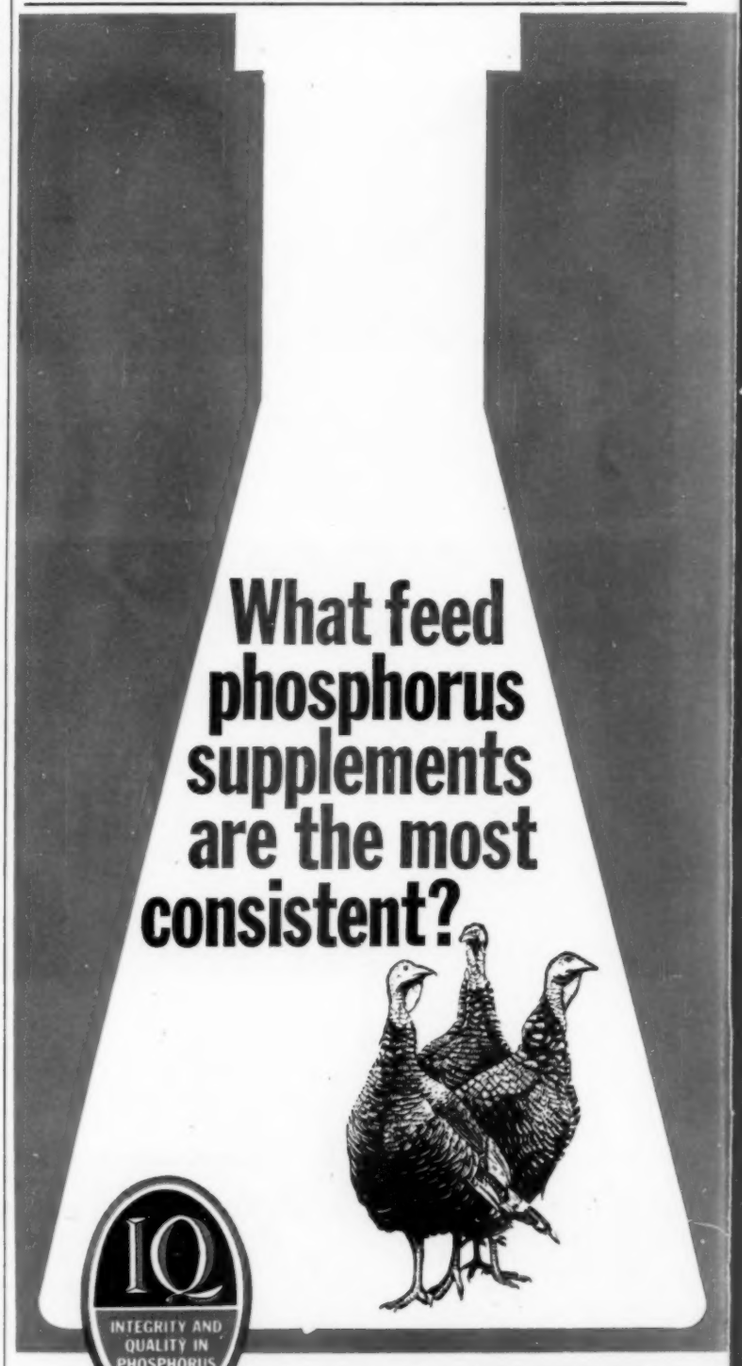
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Possibility of Raising More Broilers to Heavier Weights Cited

BLACKSBURG, VA.—The possibility of raising more broilers to heavier weights is pointed out in a news release from Virginia Polytechnic Institute.

Dr. E. L. Wisman is quoted as suggesting that the broiler industry might look into the possibility of carrying broilers more than the usual nine weeks in order to obtain more meat more economically. (Dr. Wisman's research on raising broilers to heavier weights has been reported previously, and further work is being carried on.)

There is a possibility that housewives might buy larger birds readily and that growers would receive a better margin of profit, Dr. Wisman indicated.

From the broiler grower's standpoint, the production of more meat per year would probably increase his profits. Feed consumption would go up, but since the grower would be handling four lots instead of five lots of birds, his chick costs would go down. The tests show certain indications that 10 or 11 weeks may be the best point for marketing. Further work is needed to substantiate some of the findings, and some work needs to be done to more definitely define nutrient needs of the older birds, and to solve some quality problems.

The scientist also pointed out that how many housewives would buy larger birds remains to be seen. Also, he stressed that he is not recommending that the industry suddenly shift to this procedure. "But in talking with housewives and some processors I am not sure but what a certain amount of the broiler production might be consumed in this field," he said. "Data shows that production-wise it would be economical to carry broilers beyond the customary nine-week body-weight."

Dr. Wisman's tests and scientific summaries have aroused interest in the broiler industry. For instance, at a panel discussion sponsored by American Scientific Laboratories, Inc., and preceding the National Poultry Fact Finding Conference in Kansas City, representatives of the industry concluded that "There is an untapped, large-scale demand for young roasters. A 4 to 6-pound bird, which can be stuffed, is large enough for a family's Sunday dinner or festive occasion and has a distinctive flavor."

The panelists pointed out that family-size young roasters might be just the change-of-pace bird some consumers are looking for—a switch from fried chicken now and then.

Dr. Wisman's tests, which have already run for two years, and which last year involved a total of 2,762 birds, are continuing this year. And more conclusive recommendations should be forthcoming soon, he says.

IOWA WORKSHOP "FACULTY"—Among those who served as session leaders at the fourth annual elevator and farm supply business managers' workshop at Iowa State University, Ames, were the following, seated, left to right: Dr. Robert H. Bock, school of business, Northwestern University, Evanston, Ill.; Dr. Richard Phillips, professor, department of economics and sociology, Iowa State University; and Frank Nelson, Farmers Grain Dealers Assn., Des Moines. Standing, left to right: Vern Moore, Farmers Elevator Service Co., Ft. Dodge; Urban Knobbe, Farmers Cooperative, Farnhamville, Iowa; Arnie Gertsten, Farmers Cooperative Grain Co., Story City, Iowa; Clem Milder, Quaker Oats Co., Emmetsburg, Iowa; and Bob Skinner, Western Grain & Feed Assn., Des Moines.

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How Feed Man Can Help Feeder With Pellets

MANHATTAN, KANSAS—The acceptance of pelleted feeds on the nation's farms means another area in which the feed man can be of service to the producer. This proposition was indicated by Oak B. Smith, director of market research, Wenger Mixer Mfg., Kansas City, when he participated in the program of the recent Farm Feed Handling Day at Kansas State University.

His talk, a sort of primer in the art of "Feeding and Handling of Hard Pellets," was delivered to an audience of feeders, but it suggests to the feed man how he can help the producer properly handle pelleted feeds for swine, cattle and sheep on the farm.

Following are portions of Mr. Smith's hard pellet handling analysis:

Hard pellets are pellets produced in a pellet mill equipped with a ring type die—normally a rotating die. These pellets will contain varying levels of liquids: 0-5% liquids are considered as hard pellets or range cubes; 5-14% molasses pellets are referred to as low molasses pellets, and 15-25% molasses pellets are referred to as medium molasses pellets.

Medium molasses pellets normally should be covered with a dusting agent (cottonseed meal, bentonite, etc.) if they are to be handled in bulk.

Normally, all three of these pellet types may be handled out of bulk trucks equipped with mechanical offloaders and may be stored on the farm in bulk in hoppered bottom bins, provided some simple rules are followed:

(1) Small hard pellets or crumbles containing not more than 5% total liquid additives will normally flow out of any round, square or rectangular bin hoppered 50° or more above the horizontal. Center hoppered bins will cause bridging from time to time, and side hoppers are preferred.

(2) Low molasses pellets (5-14% molasses) or range cubes should normally be stored only in square or rectangular corner hoppered bins, these bins having two vertical sides at right angles to one another, with the other two sides hoppered at least 55° above the horizontal.

(3) Medium molasses pellets (15-25% molasses) should be stored in bulk only in rectangular or square bins having three vertical sides, with only one side hoppered, and that to be hoppered 60° above the horizontal.

Corner Hoppers

In my opinion, it is a good rule to use corner hoppers on all square or rectangular bulk bins in which pellets are stored on the farm, rather than center hoppers. Center hoppers will give flow troubles from time to time, even on small hard pellets containing less than 5% liquids. If round bins are to be used, the bins should be of horizontally corrugated steel, and should be side hoppered, and degree of hopper should be increased by 5% over those figures just given for minimum hopper angles on square or rectangular bins.

True high molasses pellets (30-50% molasses) are always dusted with a dusting agent, and should not be stored in bulk on the farm unless the pellets are fed directly from the bulk truck into properly designed self-feeders. Normally, high molasses pellets will be received in bags, but may be received in bulk provided they are well cooled and provided that they are conveyed directly from the bulk truck into feed troughs or properly designed self-feeders.

HANDLING HARD PELLETS ON THE FARM—Hard pellets may be delivered to the farm in bulk trucks equipped with either air or screw conveyor unloading devices. Air unloaded bulk trucks have the advantage that they can elevate pellets to greater heights than most mechanically operated screw conveyor arrangements, but the air system normally will produce more fines than a mechanical offloading system, in our experience.

It is also possible today to equip flat bed trucks with bulk unloaders. These units give the farmer a dual purpose truck (bags or bulk) with a minimum of investment. These units have been designed to successfully handle both bulk or bagged hard pellets, and well cooled bulk high molasses pellets as well.

Receiving

Normally, three methods of receiving hard pellets on the farm are practical:

(1) Pellets may be received in bulk from bulk trucks, and loaded directly from those bulk trucks into self-feeders properly designed for the critter to be fed.

(2) Pellets may be received in bulk on the farm from bulk trucks, and stored on the farm in bulk storage tanks (as previously described). In this case, bulk pellets will later be discharged from these bulk tanks into:

(a) Bulk feed wagons equipped with mechanical offloading devices. These wagons are then used to load complete pelleted rations as required for each feeding into troughs in the feedlots or into self-feeders in the feedlot.

(b) In-transit mixers where pellets used are concentrate pellets, and are to be mixed on the farm with locally grown roughages and/or grains. These in-transit mixers are normally fitted with mechanical offloading devices to feed the mixed ration into feed troughs in the feedlot.

(c) Movable bulk feed transit tanks mounted on overhead tracks. These units are filled from the overhead bulk storage bin, and are run along their tracks to convey bulk pellets to pig creeps, to calf creeps, to feed dispensers in milking parlors, to poultry feeders, etc.—where moderate amounts of feed (normally less than a ton) need be conveyed over short distances.

(d) Screw conveyors, drag conveyors or continuous mixers which convey feed to feedlot troughs. In connection with screw or drag conveyors feeding pellets from bulk bins to feedlots, much ingenuity has been shown in the design of these units. Drag conveyors and screw conveyors have been used in this manner which serve a whole series of self-feeders in the feedlots. Most of these have been equipped with hand operated slide gates so that each feeder may be filled simply by opening these slide gates.

On other such units, an opening is left over each feeder, with no slide gate, so the self-feeder is chock full all the time, and the screw conveyor simply acts as a feed run around.

These devices have minimized labor in feeding tremendously. However, I may say that I would prefer such a method of loading self-feeders only when you are feeding concentrates from the bulk bins, rather than complete pelleted rations. Where concentrates are percentage fed from overhead bulk bins into such conveyors, as these conveyors are carrying farm ground grains or silages, or both, they seem to do very well. But where complete pelleted rations are to be fed to cattle, sheep, swine or poultry, I prefer an arrangement in which self-feeders are loaded with pellets in the feedlots directly from the bulk truck which delivers the pellets to the farm or feedlot.

Such an arrangement eliminates one handling of the feed altogether. It reduces the level of fines, in that screw or drag conveyors will produce

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some fines in conveying pellets to self-feeders.

Some time ago I saw an installation on the West Coast in which two men were feeding 30,000 sheep, using large self-feeders spotted close to the driveway lane, on either side of that drive. Certainly, it would be hard to imagine a better arrangement, from the standpoint of labor saving.

In this fine layout, pelleted complete rations were stored in overhead bulk tanks. These tanks were equipped with rack and pinion type slide gates at the bottom. A large (8-10 ton) bulk truck was driven under this storage tank. The bulk truck was equipped with a mechanical screw type offloader with a long pivoting offloading boom. The driver drove the truck down a driveway lane, which had pens on either side, and with one self-feeder in each pen. The helper removed the filling hatch from the top of each self-feeder, guided the unloading boom into place, and told the driver when to start and stop the offloading mechanism. After each self-feeder was filled, the helper replaced the filling hatch cover on these two ton self-feeders, and went on to the opposite feedlot, in which the procedure was repeated.

This type of arrangement makes it possible to feed a lot of critters, with minimum investment in equipment, and with the minimum expenditure of labor in feeding.

All that these sheep received was the complete pelleted ration (hay-based pellets), plus salt and fresh water, which was flowing at all times through long troughs at the back of each feedlot (continuous trough running full length of the entire group of feedlots).

Similar arrangements are in use in cattle feedlots, and in dairy feedlots over much of the West, and in an increasing number of places in the Midwest.

(3) Pellets may of course be received in bags on the farm. This will normally be the case where small numbers of critters are to be fed, or where insufficient storage in bulk tanks is available.

FEEDING HARD PELLETS TO SWINE—When young pigs are separated from the sow and put into drylot starter pens, the creep is sometimes pulled out into those pens. Should you decide instead to install separate self-feeders in these drylots, you might keep the following points in mind about the design of these self-feeders for pigs:

(1) Self-feeders should be large enough to store several days supply of pellets.

(2) Self-feeders should have an adjustable throat leading into the feed trough.

(3) Self-feeders should be designed to keep pellets dry and clean, and should provide shade for pigs while feeding. In order to do this, some feeders build walk-in self-feeders, even for young pigs.

(4) Self-feeders should be solidly constructed and mounted on skids for easy tow to new location in drylot. A litter of hungry pigs can cause a lot of havoc, so keep construction heavy.

(5) Self-feeders should protect pellets from wind and rain.

(6) Self-feeders should have at least 12 in. of feeder space for each three or four pigs in drylot. Again, it is desirable to divide the feeder into compartments.

(7) If you build a two-sided self-feeder, hopper the self-feeder toward the center to a point about 4 in. outboard of the vertical center wall of the feeder. This hopper should be approximately 50° below the horizontal.

(8) Feed troughs should have their upper ledge about 4 in. above the ground if you are separating the pigs from the sow at 5 lb. of weight, but may go to 5 in. in height if you plan to keep the pigs on the creep for 2 or 3 weeks before transferring them to drylot.

(9) Feed troughs in the feeder should be rounded upwards, rather than having square corners.

(10) Feed troughs should be only about 3 in. deep, and not more than 6 in. wide. Wider troughs simply will wind up full of pigs' feet.

(11) Top loading ports should be

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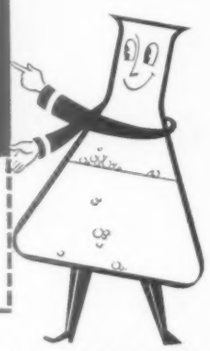

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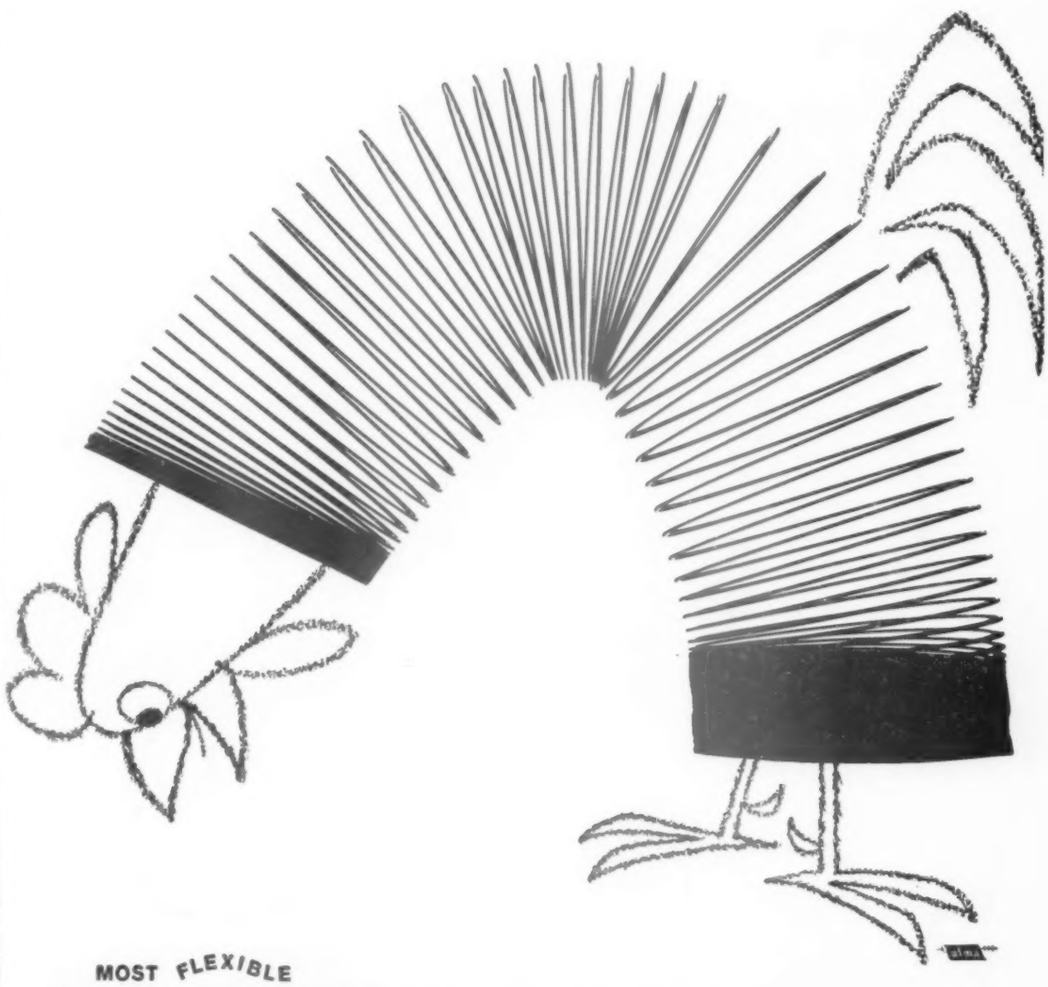

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equipped with removable hatches, or with hinged roofs so entire feeder can be opened up for loading from bulk trucks.

(12) Portability is desired in most cases—hence the recommendation for mounting the self-feeders on skids. If feeding area of the drylot is to be cemented, portability is less important. Where self-feeders are to be installed on cement feeding aprons, I believe that some authorities on swine management practices are recommending that a cement slab of 10 by 70 ft. will handle up to 90 young pigs (to 100 lb. weight) and that this same area will handle 45-50 larger hogs (150-200 lb. weights).

Drylot feeding of starter pigs, and also of pigs being fed a grower-finisher ration, seems to be an established practice, and one which is growing rapidly. The feeding of complete pelleted rations during the starter period are feeding programs which many successful feeders have adopted, and it appears that there is a growing movement towards complete pelleted growing and finishing rations, even when the pig to be finished is allowed green pasture.

FEEDING HARD PELLETS TO CATTLE AND SHEEP — Complete pelleted hay-based rations for sheep and cattle are here to stay. In the West, hundreds of thousands of sheep are fed each year on complete pelleted hay-based rations. Many of these rations are fed in feedlots built along the line described previously.

I might add here that the large self-feeders, holding a couple of tons apiece of complete pelleted rations make it almost as easy for the small feeder as for the feedlot operator to handle bulk pellets.

Lambs for example will eat about 4 lb. of pellets per head per day, and beef calves will eat upwards of 20 lb. per head per day. So a moderately small feeder, fattening out only 400 sheep or 80 beef calves, will use each week a small bulk truck (6-7 tons) of pellets delivered to his self-feeders. This means the moderately small feeder can enjoy nearly as many advantages from pelleted complete rations as the big feedlot operator previously mentioned.

Roughage Pellets

Whatever the type of roughage used, it seems that roughage-based, pelleted, complete rations are here to stay. These complete and pelleted rations may be fed easily through self-feeders, which may be sized to hold from 2 tons to 5 tons of pellets.

Throats of the self-feeders should be adjustable. Troughs should be only about 6 in. wide, and not over 4 in. deep with base of the trough about 16 in. above the ground for cattle or about 8 in. above the ground for lambs.

The trough should be sheltered with a sharply overhanging eave, to keep rain and snow out of the feed trough. If these eaves overhang about 30 in. you'll protect the feed as well as the critter. Some feedlot operators are extending the sides of the self-feeder outward to the edge of the eaves, and vertically downward from the eave line, to protect the feed in the trough from blowing moisture, and to act as a windbreak for both feed and critter.

For cattle, provide about 12 in. of trough space for each critter in the lot, but for sheep, only about 5 in. is necessary. In either case, install removable 18 in. large diameter feed inlets in the top of the self-feeder, with cap-type, waterproof, removable lids.

Don't make the mistake which one feeder made and extend the eaves down too close to the ground. Calves like to scratch the tops of their heads on these eaves, and the fellow I'm thinking of had the whole roof of his self-feeder torn off by an itchy steer.

Dairy Cattle

The problem with the milking parlor is that the cows can be milked in some cases more quickly than they will eat the desired amount of concentrate if that concentrate is fed in meal form. Since pellets will be eaten in a hurry, most of these milking parlors use concentrate in pellet form.

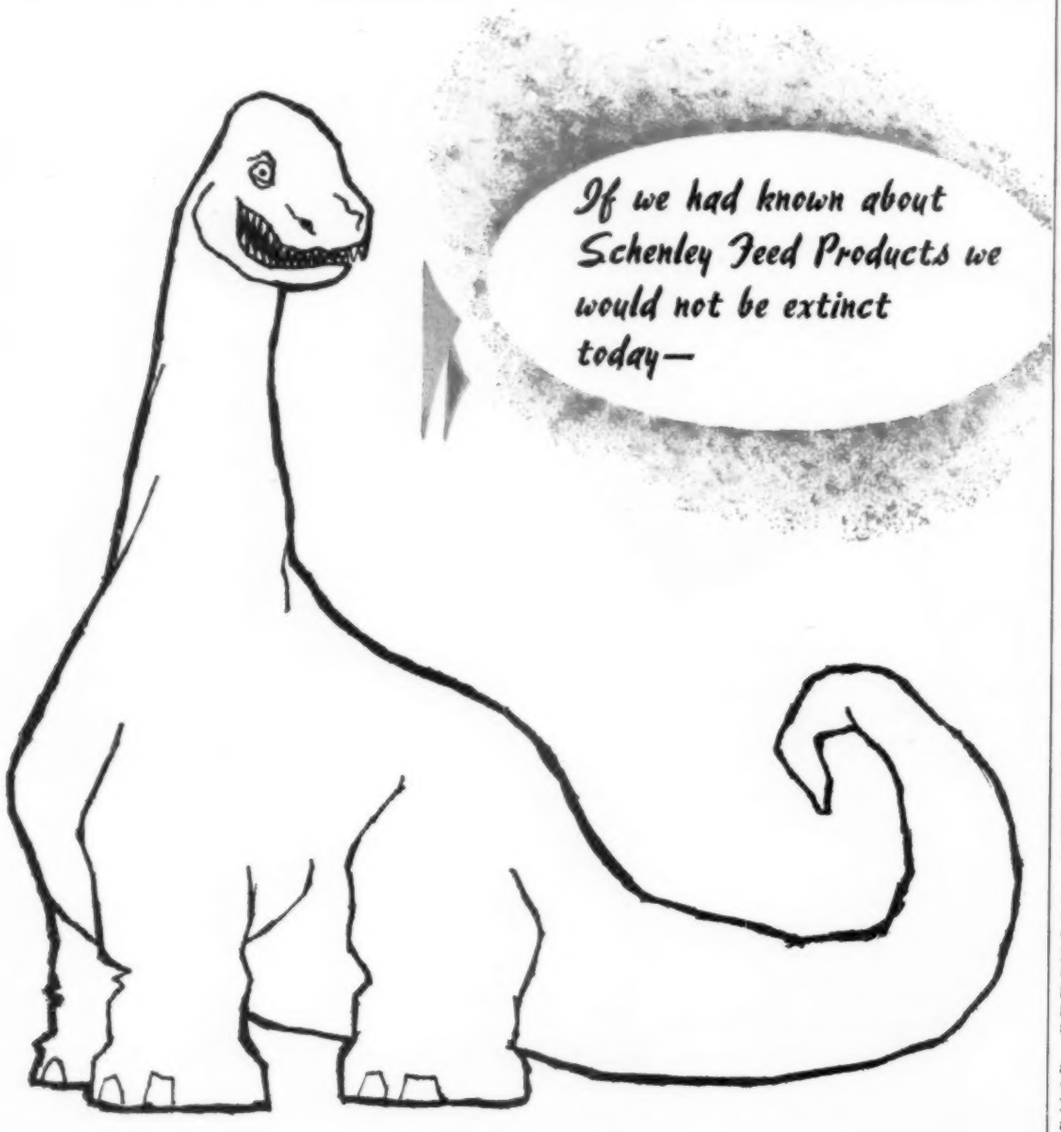
It is an established practice to adjust the amount of concentrate fed to each cow to her milk production level—the big producer receiving more concentrate than the cow which produces less milk. Small bulk feed tanks are normally installed above each milking position, and a rotary wing-type feeder installed in the bottom of these feed tanks will permit the operator to give the desired number of turns on a small hand crank on this feeder, thus giving each cow the correct amount of concentrate pellets.

CONCLUSION — I would suggest that many of you are finding a closer working relationship with the manufacturers of formula feeds and with the local dealers for such manufacturers. Normally, these formula feed manufacturers have developed concentrates around the latest in nutritional developments and have developed proven feeding programs which will help you remain competitive in this most competitive market.

In addition, many of the local dealers for these feed manufacturers are offering a local pelleting service, and some of them combine this with a grain bank and/or a hay bank to permit the most effective utilization of farm grown grains and roughages.

These services help you produce the maximum returns from every acre of your land by selling that production as meal, butterfat or eggs, produced with the latest in nutritional advances, on proven feeding programs and with outstanding rates of gain and fine ratios of feed conversion.

I believe that pelleting will play an even larger place in feed production in the future than it does today. In the final analysis, it will do so, as I believe to be the case, if it helps you produce better gains at lower costs in feed utilization, in feed conversion and in labor.



Schenley's Corn Distillers Dry Grains with Solubles

are the most popular protein supplement and feed mix for dairy cows and cattle.* They include GFF, the Grain Fermentation Factor, and are always fairly and realistically priced. Write or wire today.

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26 E. 6th St., Cincinnati 2, Ohio
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Farm Bureau Urges Big Turkey Movement

CHICAGO—An all-out merchandising program to help move the record supply of turkeys into consumption is being urged by the American Farm Bureau Federation.

In letters to officials of national associations of independent and chain grocers, Charles B. Shuman, American Farm Bureau Federation president, said:

"We solicit your support in an all-out merchandising program to help move a record supply of turkeys into consumption in an orderly manner.

"According to the most conservative estimate, turkey producers in this country will produce at least 10% more turkeys this year than last. Production may reach a level as much as 20% above the record-high output of almost 85 million turkeys last year.

"Through May, the 1961 hatch of poults will be about 25% above last year. A hatch this large will represent a record high in per capita output of turkey meat in this country.

"Turkey slaughter is increasing each week. For the week ended May 17, the total turkey slaughter exceeded the comparable slaughter of a year earlier by 44%, with a 66% higher slaughter of young turkeys.

"Frozen turkey stocks decreased 17 million pounds during April to 110 million pounds by May 1, and the out movement continued through May. However, stocks on hand in 35 cities on May 22 exceeded year earlier stocks by more than 14%.

"Wholesale prices for the various classes of turkeys are running about 7 to 9¢ per pound under year earlier figures. Farm prices are correspondingly lower. The future farm price outlook is not encouraging.

"The National Turkey Federation will propose specific dates for a special turkey merchandising campaign. It will be to everyone's advantage, in the long run, if large numbers of turkeys are marketed at the earliest possible time."

Former Biochemical Head Pleads Guilty

SIOUX CITY, IOWA—Harold Kistner, Jr., former president of Northern Biochemical Co., Sheldon, Iowa, in a surprise move, has pleaded guilty to helping embezzle $2 million from the Sheldon (Iowa) National Bank.

Mr. Kistner, appearing in federal district court here, also pleaded guilty to a charge of fraudulent sale of stock in Northern Biochemical.

It was the second time that Mr. Kistner, who with Mrs. Burnice Geiger was a central figure in the embezzlement, had been charged with aiding and abetting the embezzlement. The first charge had been dismissed on lack of evidence.

Mrs. Geiger is now serving a 15-year prison sentence.

At the time the embezzlement was discovered, it was indicated that $900,000 of the $2 million total had found its way into the accounts of Northern Biochemical Co.

The former president of the feed additive firm now faces a maximum of five years in prison and $5,000 fine on each of 16 counts to which he has pleaded guilty or been convicted. Mr. Kistner had been convicted April 28 of using the mails to sell unregistered stock in Northern Biochemical.

Hygromycin-Antibiotic Combinations Asked

WASHINGTON — The Food and Drug Administration has announced the filing of a food additives petition covering use in chicken feeds of combinations of hygromycin B and other antibiotics.

FDA said Elanco Products Co., division of Eli Lilly & Co., has proposed issuance of a regulation to provide for use in chicken feed of hygromycin B in combination with penicillin, Streptomycin and bacitracin for growth promotion; and of hygromycin B in combination with penicillin, Streptomycin, bacitracin and chlortetracycline for the prevention or treatment of certain diseases of chickens, as an aid in maintaining or increasing egg production and hatchability of eggs, and as an aid in the prevention of early mortality of chickens.

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. . . MORE REPEAT SALES!

NEW
NECTARIZED
CALF-PAB

When Dairymen smell new NECTARIZED Blatchford's Calf-Pab's delicious aroma, they want to buy it. When they see how their calves go for its **extra** smackin' good milk flavor—they come back for more! Their calves eat better, grow better. Low cost . . . proved high quality . . . Calf-Pab gives you a high mark-up profit.

Write for Free Nectarized Display Now!

Blatchford's ESTABLISHED IN 1900
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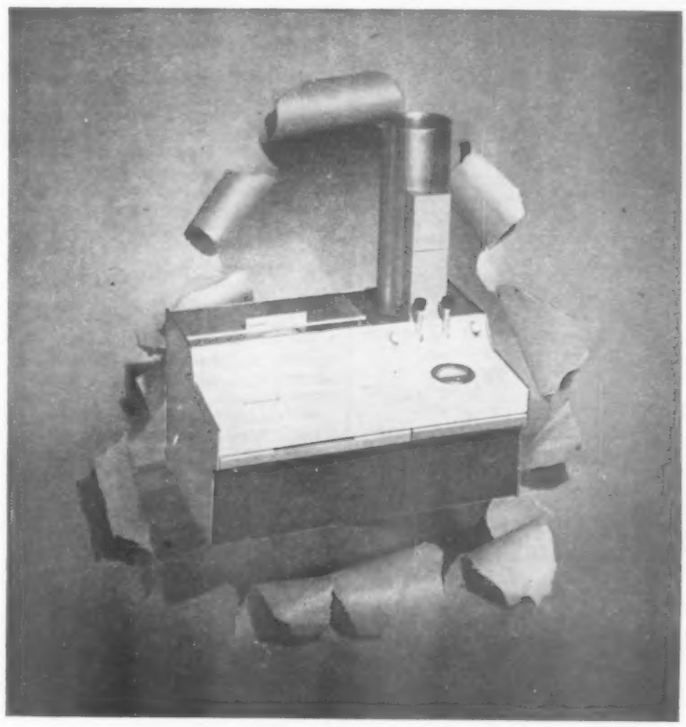
Midwest Plant: Des Moines, Iowa
West Coast Division: Nampa, Idaho

"The Name You Can Trust in Specialty Feeds"



A Major Breakthrough in Moisture Testing

The new Burrows Moisture Recorder — a major break-through in moisture testing of all grains. New discoveries in electronics assure its accuracy. Tests for each type of grain are specially programmed. A thermistor takes the temperature of the grain automatically and relays it to the electronic brain. The test cell corrects for variations in weight per bushel. All factors are fed into the electronic circuit and computed by the instrument. Moisture percentage is read visually on a lighted dial. A printing device records the moisture percentage reading on a scale ticket or other slip of paper.

Write for circular

Accurate — Balanced electronic circuit is self-adjusting

No charts — Direct moisture percentage reading on a lighted dial. Human errors eliminated

Automatic temperature correction — No separate temperature tests

Fast complete reading in 5 secs.

Printed Tickets — Moisture percentage can be printed on scale ticket automatically

Large 250 gram sample

Automatic wt. per bu. correction — Patented test cell adjusts for all variations

Liberal trade-in allowance

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Screw Conveyor

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RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7524—Conveying and Rotary Valves

A four-page folder covering new lines of conveying and rotary valves specifically designed for the handling of products through pneumatic systems, is now available from Systems Engineering & Manufacturing Co., Inc.

Included in the folder are photographs of valves, drawings of standard models, operational and installational information, and capacity and dimension information.

For additional information, check No. 7524 on the coupon and mail.

No. 7525—Bulk Feed Unit

FMC Bulk Transport Systems has announced the availability of a bulk feed unit which permits either mechanical or pneumatic unloading by the same body on the same delivery trip. The TGM-P unit provides a combination mechanical-pneumatic bulk body, and FMC's aluminum construction makes it available at mounted weights less than many single purpose units, it is said.

This unit places the mechanical unloading system at the front end, behind the truck cab, enabling the driver to "drive into" the holding bin.

The mechanical stinger is electrically operated up-down, right-left, with controls located on the body as

well as a dual control bank placed on the dashboard of the truck cab.

The pneumatic unloading system offers rear center discharge, such as recently made available in the single purpose Model TGP design, A lightweight rotary positive blower is mounted on the chassis frame, direct driven from the power-take-off.

Power for operation of the combined mechanical-pneumatic systems is obtained from a PTO hookup, which is described as strictly all-mechanical.

The mechanical system offers FMC's paddle conveyor design, which handles pellets with virtually no damage and consistently unloads up to a ton per minute. Each body compartment has an individual knife-action sliding gate with which feed flow can be metered or fully cutoff.

Gates can be operated either from tank-top or ground-level, enabling unloading compartments in any desired order. The pneumatic system, according to company officials, offers virtually 100% body and conveyor cleanout, no feed leakage, as well as center discharge for right or left delivery.

For more information, check No. 7525 on the coupon and mail.

No. 7528—Gyro-Cooler Data Sheet

Availability of a technical data sheet describing the recently developed gyro-cooler has been announced by Young Machinery Co., Inc.

The single-page illustrated data sheet gives design information concerning the new unit which cools and sifts granular products simultaneously. Complete specifications and dimensions are also included.

For copies of data sheet No. 601, check No. 7528 on the coupon and mail.

No. 7529—Pneumatic Unloading Systems

The availability of a new bulletin showing the application of pneumatic unloading systems with hydraulic drives to all types of trucks and trailers has been announced by Sprout, Waldron & Co., Inc.

Company officials say that with Sprout-Waldron pneumatic unloading systems, any van or stake body truck, or a trailer, can be converted into a unit able to pipe-in feed to the customer's bin.

No other equipment is said to be necessary. A truck can deliver in bulk and still be available for its regular tasks of delivering sacked feed, as well as other farm supplies.

For a copy of this bulletin, check No. 7529 on the coupon and mail.

Screw Conveyor Calculator

The Thomas Conveyor Co., Inc., has announced the availability of its Thomas Screw Conveyor Calculator, which is now available to all qualified engineers.

The calculator is an easy to read, five-window sliding computer that in-

stantly calculates conveyor capacity, component horsepower capacity, capacity conversion, material horsepower and friction horsepower.

The calculator may be obtained from the Thomas Conveyor Co., Inc., Box 11127, Ft. Worth, Texas, at no cost to qualified engineers when requested on company letterhead.

No. 7530—Conveyor Literature

New literature on its Super-Flo Conveyor, which is said to provide an "improved concept in conveying efficiency," is now available from the Screw Conveyor Corp.

The Super-Flo Conveyor is described as capable of handling any free-flowing material gently without tumbling or degradation. Combination horizontal and inclined units are available. Flights for conveyors 14 in. and smaller are molded from tough, durable, non-metallic "Screwco" nylon-type material.

Features of the Super-Flo Conveyor include anti-tilt bars, sturdy guide support, aluminum alloy plastic-faced chain return bar, combination or steel side bar chain with flights attached and aluminum alloy holding bar.

The troughs, which are available in regular or heavy gauge steel, stainless or non-ferrous metals, are made in the following widths: 6, 9, 12, 14, 16, 18, 20 and 24 in.

A divided-flow inlet spout is designed to normalize the intake, thereby choking cannot occur—nor can the chain or flights become smothered.

Remote or manually operated discharge gates to suit individual needs are furnished. Feed and discharge points may be located as conditions require.

For a brochure on the Super-Flo Conveyor, check No. 7530 on the coupon and mail.

No. 7527—Air Unloading For Mobile Units

Introduction of an improved air unloading system designed for mobile milling equipment has been announced by Ripco, Inc.

This new system "unloads the mixing tank in approximately one-half

the time and delivers the feed through the piping systems that heretofore created many unpleasant experiences for the operator," officials said.

Company officials say that more batches of feed can now be handled per day.

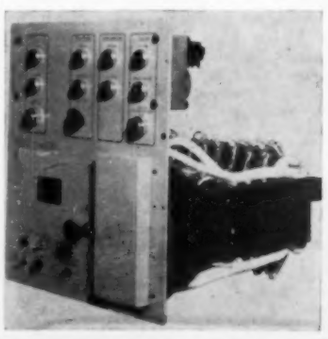
For additional information, check No. 7527 on the coupon and mail.

No. 7526—Batch Process Controller

Development of a new punch card-programmed batch process controller for use in conjunction with standard machinery in the automatic manufacture of batch processed products has been announced by Control Equipment Corp.

The new controller is designed to shorten batching time, produce a uniform product, reduce waste and increase production. It controls all batching operations such as loading and filling, temperature, speed and pressure changes and timing. Because of punch card programming, it is said to be particularly applicable to operations where many formulas are manufactured from varying combinations of the same ingredients.

The controller is programmed by means of holes punched in tough



Send me information on the items marked:

- ☐ No. 7524—Rotary Valves
- ☐ No. 7525—Bulk Feed Unit
- ☐ No. 7526—Process Controller
- ☐ No. 7527—Air Unloading Units
- ☐ No. 7528—Data Sheet
- ☐ No. 7529—Unloading Systems
- ☐ No. 7530—Conveyor Literature

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SLIP OUT — FOLD OVER ON THIS LINE — FASTEN (STAPLE, TAPE, GLUE) — MAIL

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plastic cards with one card used for each formula. Holes are punched according to simple rules; no special knowledge is required. Programming is normally done by regular plant personnel, using a simple hand punch. After a formula has been translated to holes on a card, the card can be reused indefinitely. The card reader is a rugged, reliable, heavy-duty type, which incorporates automatic features to prevent improper insertion of the card.

Company officials report that the controller can load ingredients in any quantity from drops to tons.

For additional information, check No. 7526 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7460—Temperature control for hogs, L. A. Pockman Manufacturing Co.

No. 7461—Adjustable elbow pipe, Sweet Manufacturing Co.

No. 7462—Insect exterminator, Technical Industries, Inc.

No. 7463—Feed flavoring catalog, Flavor Corporation.

No. 7464—Hand truck, Valley Craft Products, Inc.

No. 7465—Sewing pedestal initiator, Richardson Scale Co.

No. 7466—Dispenser for laboratories, Pope Testing Laboratories.

No. 7467—High speed grinder, Prater Pulverizer Co.

No. 7468—Grain drier series, Shanzer Manufacturing Co.

No. 7469—Pellet mill, Wenger Mixer Manufacturing.

No. 7470—Pressure cooker - extruder, Sprout, Waldron & Co., Inc.

No. 7471—Grain cleaner fact sheet, Clute Corp.

No. 7472—Portable bag closure, Dave Fischbein Co.

No. 7473—Arsanilic acid booklets, Abbott Laboratories.

No. 7474—Bulk delivery truck, Pamco, Inc.

No. 7475—Cable socket for grain shovels, Brooks Machine & Mfg. Co.

No. 7476—Conveyor belting, Corns Conveyor Belt Co.

No. 7477—Moisture recorder leasing, Burrows Equipment Co.

No. 7478—Portable air filters, Fuller Co.

No. 7479—Hog health product, Dr. Salsbury's Laboratories.

No. 7480—Continuous weighing scale, B-I-F Industries.

No. 7481—Trucklift safety device, J. B. Ehrsam & Sons Mfg. Co.

No. 7482—Supplement for specialty feeds, Borden Special Products Co.

No. 7483—Conveyor literature, Finco, Inc.

No. 7484—Santoquin feeder for dehy, Wenger Mixer Manufacturing.

No. 7485—Vertical feed mixer, Shop Engineering Co.

No. 7486—On-farm feed depot, Leach Mfg. Co.

No. 7487—Boxcar unloading unit, Andrews Machine Co.

No. 7488—Pellet mill die, Sprout, Waldron & Co., Inc.

No. 7489—Swine feed additive, Hess & Clark.

No. 7490—Broiler male, Barker & McMillan Hatchery, Inc.

No. 7491—Automatic batching and mixing, Wisconsin Electrical Mfg. Co., Inc.

No. 7492—Farm mill using concentrates, The General Supply & Equipment Co.

No. 7493—Self-cleaning conveyor, Duplex Mill and Manufacturing Co.

No. 7494—Corn sheller for mobile mill, The Iowa Portable Mill Co.

No. 7495—Truck blower unit, Ripco, Inc.

No. 7496—New automatic bagging scale, Richardson Scale Co.

No. 7497—Equipment purchasing guide, The Grain Processing Machinery Mfrs. Assn.

No. 7498—Feed bag coding, Pitney-Bowes, Inc.

No. 7499—Automatic egg gatherer, Big Dutchman Automatic Poultry Feeder Co.

No. 7500—Grinding and mixing unit, Tusco Sales.

No. 7501—Conveyor model bag closure, Minneapolis Sewing Machine Co.

No. 7502—Equipment literature, Seco, Inc.

No. 7503—Basket extractor, V. C. Anderson Co.

No. 7504—Portable pneumatic unloader, Sprout, Waldron & Co., Inc.

No. 7505—Portable transfer unit, Fuller Co.

No. 7506—Automatic bulk handling equipment, The Henderson Manufacturing Co.

No. 7507—External fat application system, Wenger Mixer Manufacturing.

No. 7508—Belt-propelled tripper, Finco, Inc.

No. 7509—Ventilating fan recorders, Service Recorder Co.

No. 7510—Grain soaker-feeder, Baughman Manufacturing Co.

No. 7511—Vibration inducers, The Martin Engineering Co.

No. 7512—Broiler feed additive, Hess & Clark.

No. 7513—Air inlet for poultry houses, The Big Dutchman Automatic Poultry Feeder Co.

No. 7514—Mixing equipment, Superweld Corp.

No. 7515—Bulk feed body, Baughman Manufacturing Co.

No. 7516—Vitamin A and D products, Hoffmann-LaRoche, Inc.

No. 7517—Poultry house ventilation, Big Dutchman Automatic Poultry Feeder Co.

No. 7518—Self-powered grain spreader, General Equipment Co.

No. 7519—Dog food fortifier, Borden Special Products Co.

No. 7520—Feed service merchandising program, William E. Davies Co., Inc.

No. 7521—Centrifugal dust separator, Day Co.

No. 7522—Bulk weighing brochure, Toledo Scale Corp.

No. 7523—Steam boilers, Sellers Engineering Co.

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The Potent, Economical Source of 5 Most Important Feed Values
1. Enzymes • 2. Unidentified Factors • 3. B Vitamins including B_{12}
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FOR ALL CATTLE, HOGS, SHEEP, CHICKENS, TURKEYS
Yeast Culture Values Proven by State College Tests
Write DIAMOND V MILLS, INC. • *Cedar Rapids, Iowa*

"125,000 MILES IN TWO YEARS
WITH ONLY $62 SPENT FOR REPAIRS ON MY SIMONSEN COMBINATION BULK AND SACK BODY"

GILES FRYE—ALDEN, IOWA

March 1959, Mr. Frye, contract trucker for Ralston Purina, purchased a C-37 model bulk & sack delivery body. Here's Mr. Frye's report two years and 125,000 miles later—

"I haven't spent a dime on body repairs, and only had to spend $62.95 on the delivery auger system despite the rugged use this unit was exposed to. I estimate that during this two year period we delivered an average of 60 tons of feed a week, with 90% of this tonnage as bulk feed and the rest as sacks."

WHY MR. FRYE BOUGHT HIS SECOND UNIT
The efficient and economical performance of his C-37 bulk & sack delivery body enabled Mr. Frye to expand his feed delivery service. To take care of the additional bulk deliveries he could now make, he installed a Simonsen model U-18 Unloader on a 33 ft. tandem trailer... To be sure of performance like Mr. Fyre's, switch to Simonsen the next time you buy bulk feed equipment.

Look to SIMONSEN
for dependability and economy

WRITE, WIRE OR PHONE COLLECT
for further information about a full line of bulk & sack bodies, bulk feed bodies, unloaders and fertilizer bodies.

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Why this little chick went to market *

(WHILE ITS BROTHERS AND SISTERS STAYED HOME)

***The Secret is CLINTON CFS concentrate #3**

University tests prove that CFS Concentrate #3 stimulates rapid growth at a cost considerably under most other sources of UGF (unidentified growth factors). In controlled experiments broilers, turkeys and swine gained weight faster with CFS #3's formula of Condensed Fermented Corn Extractives dried on selected by-products from the corn wet milling industry. It is free-flowing, and handles well in bulk shipments. Test and formula data are available on request. Why not try CFS Concentrate #3 today?

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Fight HEART DISEASE #1 HEALTH ENEMY

Give HEART FUND

Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

July 12—California Feeders Day; University of California, Davis; chm., Dr. G. P. Lofgreen, Animal Husbandry Dept.

Aug. 30—"Golden Goodness of Virginia Fresh Eggs Month" Kickoff Dinner; John Marshall Hotel, Richmond, Va.; J. Paul Williams, sec., Virginia Egg Council, 615 E. Franklin St., Richmond.

Nov. 13-14 — Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., Inc., 814 Second Ave. Bldg., Seattle 4.

1962

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

June 19—Connecticut Poultry Day Program and Exhibit; University of Connecticut; William A. Aho, extension poultryman.

June 19-20—Florida State Poultry Producers Assn.; Colonial Inn Motel, St. Petersburg Beach; chm., Tom Chesnutt, St. Petersburg Beach.

June 19-21—American Association of Feed Microscopists Annual Meeting; Continental Denver Motor Lodge, Valley Highway and Speer Blvd., Denver, Colo.; sec., G. M. Barnhart, Missouri State Department of Agriculture, Jefferson City, Mo.

June 19-24—Feed Microscopy Short Course, sponsored by American Association of Feed Microscopists; Continental Denver Motor Lodge, Valley Highway and Speer Blvd., Denver, Colo.; sec., G. M. Barnhart, Missouri State Department of Agriculture, Jefferson City, Mo.

June 20-21—Alabama Poultry Industry Assn.; Whitley Hotel, Montgomery, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

June 28 and 30—"Golden Goodness of Texas High Quality Eggs" Month; June 28, Kickoff Luncheon, Texas State Hotel, Houston; June 30, Kickoff Luncheon, Baker Hotel, Dallas; T. A. Hensarling, sec., Texas Egg Council, P.O. Box 251, Stephenville, Texas.

June 29-30—Pennsylvania Poultry Federation; Pennsylvania State University, University Park; (room reservations) Russell Murphy; (program information) Glen O. Bressler, Room 105, Weaver Hall.

July 7-8—Maine Broiler Festival; Belfast, Maine.

July 14-18—Georgia Feed Assn.; Grand Bahama Club, Grand Bahama Island; sec., W. E. Merritt, Suite 1-A, 361 E. Paces Ferry Rd. N.E., Atlanta 5.

July 18-20—American Poultry Congress & Exposition; Municipal Auditorium, Minneapolis; Don M. Turnbull, sec., American Poultry & Hatchery Federation, 521 E. 63rd St., Kansas City 10, Mo.

July 24-28 — Southeastern Egg Quality and Grading School; Auburn University, Auburn, Ala.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

July 27—Technical Alfalfa Conference; co-sponsored by the American Dehydrators Assn. and USDA Western Utilization Research and Development Division; Western Regional Research Laboratory, USDA, Albany, Cal.; chm., Dr. G. O. Kohler, Chief, Division Field Crops Laboratory, Western Regional Research Laboratory, 800 Buchanan St., Albany 10.

Aug. 2-4—West Virginia Poultry Assn. Convention and Festival; Moorefield, W.Va., sec., Wilson Smith, Petersburg.

Aug. 3-4—National Soybean Processors Assn.; Edgewater Beach Hotel, Chicago, Ill.; sec., Wm. K. Self, 3818 Board of Trade Bldg., Chicago 4, Ill.

Aug. 7-9 — Southeastern Management Roundtable; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 7-12—Texas Feed Microscopy Short Course; Memorial Student Center, Texas A&M College, College Station; E. E. Brown, Station Microscopist.

Aug. 8-9—Wisconsin Nutrition School; Memorial Union, University of Wisconsin, Madison; Dr. Robert Grummer, Animal Husbandry Dept.

Aug. 9—Science at Work, Open

"Our New CHIEF ECONOMY MODEL is here!"

NOW **LOAD AND UNLOAD BULK MATERIAL TWICE AS FAST WITH HALF THE LABOR**

Today there's a new way to make bulk delivery pay with the Henderson Chief ECONOMY system—purchased complete or installed on your present grain body.

Henderson announces the biggest bulk industry news of '61—proved, practical one man loading and unloading! Now one man automatically loads and unloads a ton of bulk material every 2 to 4 minutes.

You can install the simple, foolproof ECONOMY MODEL into your present grain body or purchase the unit complete through your nearby Chief Distributor. This economical, automatic unit hydraulically carries material to and from the body. You position and operate the boom and upright augers automatically from one master control panel.

WHAT IT COSTS

Because of its basically simple principle, the ECONOMY MODEL costs surprisingly little. Call your Chief Distributor today for price quotations.

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P. O. Box 60, Dept. J66
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Please send full information about your ECONOMY MODEL BB61, BB71, BB71T with loading and unloading features. I deliver _____ tons of bulk material per year.

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Aug. 13-18—School of Executive Development in Business Management, Unit II; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Aug. 18 — Ohio Swine Day; Ohio State University, Columbus.

Aug. 20-22 — National Hay Assn.; Phoenix Hotel, Lexington, Ky.; sec., Mrs. Elgene L. Hicks, 900 E. Bridge St., Plainwell, Mich.

Aug. 21—Illinois State Turkey Growers Assn.; Willis Clark farm, U.S. Hwy. 150, Mahomet, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

Aug. 21-22—Kentucky Feed & Grain Association; Brown-Suburban Hotel, Louisville, Ky.; sec., Jack Weber, Box 425, Lexington.

Aug. 24-26—North Carolina Feed Manufacturers Assn.; Cavalier Hotel, Virginia Beach, Va.; sec., McNair Evans, Box 428, Laurinburg, N.C.

Aug. 24-27—Georgia Poultry Institute; Rock Eagle 4-H Club Center, Eatonton, Ga.; Dewey McNiece, Extension Poultry Dept., University of Georgia, Athens.

Aug. 28-29 — American Soybean Assn.; Claypool Hotel, Indianapolis, Ind.; Geo. M. Strayer, Hudson, Iowa.

Sept. 11-12 — Minnesota Nutrition Conference; Institute of Agriculture, University of Minnesota, St. Paul; chm., Dr. L. E. Hanson, Animal Husbandry Dept.

Sept. 11-13—Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 13-14—Maryland Feed Service Conference; Chemistry Auditorium, University of Maryland, College Park; Wade H. Rice, Poultry Dept.

Sept. 14 — Small Mill Workshop; Continental Hotel, Kansas City, Mo.; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 17-19—Northwest Retail Feed Assn.; Hotel Pick-Nicollet, Minneapolis, Minn.; sec., W. D. Flemming, Grain Exchange Bldg., Minneapolis 15.

Sept. 18-19 — Pet Food Institute; Drake Hotel, Chicago, Ill.; sec., Clyde Kassens, 333 N. Michigan Ave., Chicago 1.

Sept. 19 - 21 — Marketing Seminar for Feed Manufacturers; Morrison Hotel, Chicago; Sales Executives Council, American Feed Manufacturers Assn.; W. E. Glennon, president, 53 W. Jackson Blvd., Chicago.

Sept. 19-27—International Conference on Fish in Nutrition; Washington, D.C.; sec., Dr. Erik Heen, Chief, Fisheries Technology Branch, Food and Agriculture Organization, Washington 25.

Sept. 20-21—American Feed Manufacturers Assn. Marketing Seminar; Morrison Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago.

Sept. 22-23—Iowa Feed Conference; Memorial Union, Iowa State University, Ames; Dr. H. L. Self, Animal Husbandry Dept.

Sept. 22-23 — Iowa Feed Conference; Memorial Union, Iowa State University, Ames; chm., Dr. C. E. Summers, Animal Husbandry Dept.

Sept. 24-26—Southeastern Feed Production School; Continuing Education Center, University of Georgia. Athens.; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Sept. 27-29—National Feed Ingredients Assn.; Lake Lawn Lodge, Delavan, Wis.; sec., I. Levin, 517½ E. Locust St., Des Moines 9, Iowa.

Sept. 27-29—Pennsylvania Millers & Feed Dealers Assn.; Hotel Hershey, Hershey, Pa., sec., D. W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 28-29 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; Dr. E. L. Stephenson, animal industry and veterinary science department.

Oct. 2-3—Washington Poultrymen's Institute; Centralia Junior College; Dr. Leo Jensen, Poultry Science Dept., Washington State University, Pullman.

Oct. 3-5—Northeastern Poultry Producers Council Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-6—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Poultry Science Dept.

Oct. 8-10—Poultry Industries of Louisiana; Bellemont Motor Hotel, Baton Rouge, La.; sec., Stella Jones, Poultry Industry Dept., Louisiana State University, Baton Rouge.

Oct. 10-11—Iowa Poultry Convention; Veteran Memorial Auditorium, Des Moines; sec., Iowa Poultry Assn., LeRoy Kruskop, 535 E. Lincoln Way, Ames, Iowa.

Oct. 15-20—School of Executive Development in Business Management, Unit III; Continuing Education Center, University of Georgia, Athens;

CALENDAR FOR 1961-62

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Based on the expected selling price of hogs and the price of corn, the farmer can learn the price he can afford to pay for a feeder pig per head or per hundredweight. He simply moves the calculator's slide up or down and reads the answer in the corresponding window.

The calculator, available free of charge at Landmark retail stores and elevators, was developed by C. C. Brown, extension swine marketing specialist of Ohio State University, and R. H. Blosser, agricultural economist of the Ohio Experiment Station, to meet a need of farmers for a simplified method of determining profitable feeder pig prices.

In figuring their prices, Mr. Bowen and Mr. Blosser also took into account such additional feeder pig requirements as pounds of grain, pounds of protein supplement, labor costs, veterinarian and medicinal expense, interest, marketing costs and housing and equipment costs.

The answer to the price problem at the beginning of this story is said to be "easy, when you have a calculator." The break-even price is $21.70 per head or $43.40 cwt.

sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Oct. 16-17—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; sec., California Hay, Grain & Feed Dealers Assn., Leo L. Johnson, Blue Anchor Bldg., 1400 10th St., Sacramento, Cal.

Oct. 23-25 — Centennial Nutrition Conference; Hotel Muehlebach, Kansas City 5, Mo.; sponsored by Midwest Feed Manufacturers Assn. and Land-Grant Colleges in Midwest's area; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 24-25—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19.

Oct. 24-25—Indiana State Poultry Assn.; Hotel Severin, Indianapolis; sec., Robert L. Hogue, Poultry Science Bldg., Purdue University, Lafayette.

Oct. 26-28—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Head, Feed and Fertilizer Control Dept., University of Kentucky, Lexington.

Nov. 1—Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Dr. Philip Derse, Wisconsin Alumni Research Foundation, 506 Walnut St., Madison 5, Wis.

Nov. 1-2—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 1-3—Cornell Nutrition Conference; Statler Hilton Hotel, Buffalo, N.Y.; chm., Prof. Douglas E. Hogue, Animal Husbandry Dept., Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 8-9—Illinois Feed Assn.-Illinois Poultry and Hatchery Federation joint convention; Springfield Armory, Springfield; sec. I.F.A., Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., I.P.H.F., Aubrey Harless, Shelbyville, Ill.

Nov. 16-19—Florida Nutrition Conference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

Dec. 6-7—Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed and Grain Dealers Assn.; Pantland Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

Dec. 7-8—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. G. H. Wise, Animal Nutrition Section, Animal Industry Dept.

1962

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 29-31—Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 9-11—Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 16 — Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 20-21—Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 26-March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 21-23—Grain & Feed Dealers National Assn.; Denver-Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 - 15th St. N.W., Washington, D.C.

March 28—Commercial Egg Clinic; Texas A&M College, College Station; B. C. Wormell, Extension Poultry Husbandman.

April 9-10—National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-12—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 19—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

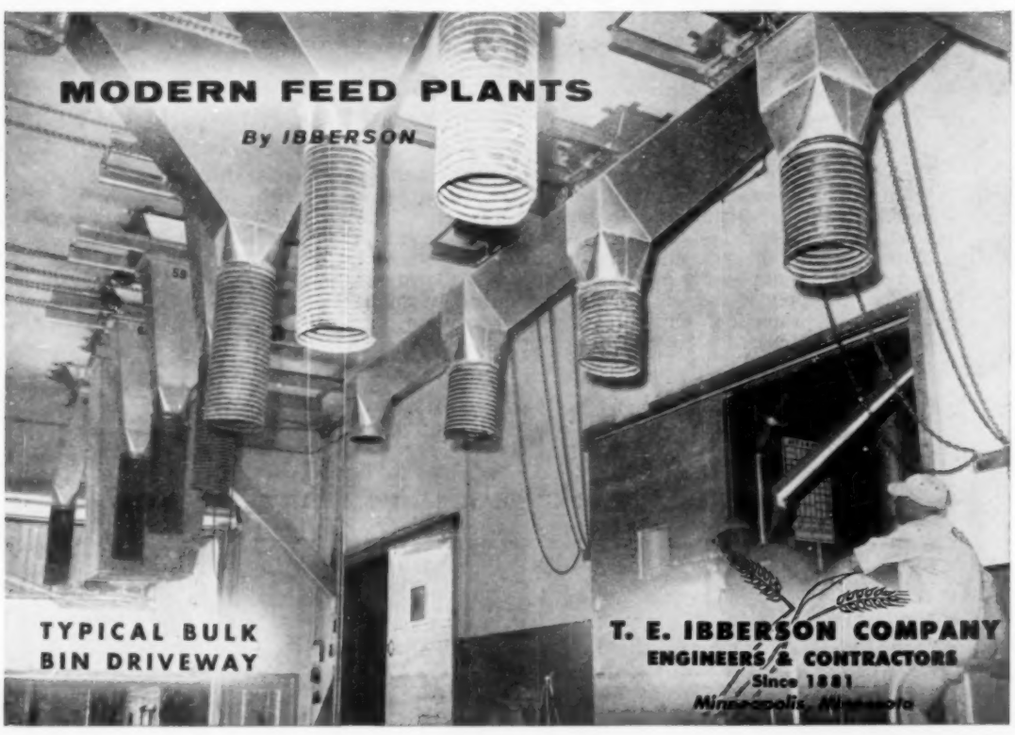
April 26-28—Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

Aug. 13-18 — 12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.



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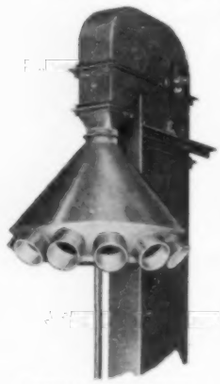

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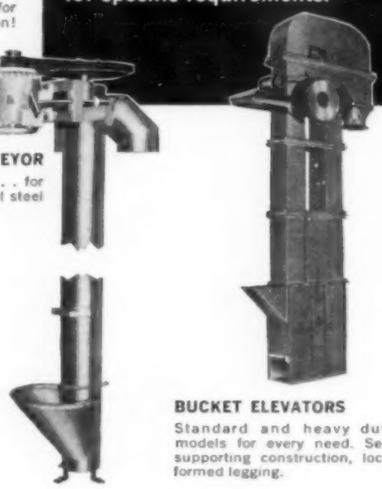

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Packing Firm's Switch To Marketing Concept Of Operation Told

By THOMAS E. LETCH
Feedstuffs Staff

KANSAS CITY—The way in which a major meat packing company is changing its operations and some of the reasons behind these changes were discussed by Dr. William J. Shannon, vice president of sales and merchandising, The Cudahy Packing Co., Omaha, at a June 6 meeting of the Kansas City Chapter of the American Marketing Assn.

The speaker pointed out that Cudahy is now operating under a marketing concept. The firm is developing and selling top quality consumer-identifiable products, the specifications for which are rigidly controlled, he said. This assures that no matter which of Cudahy's plants produce a particular product, it will be the same quality.

Dr. Shannon, who recently joined Cudahy to direct the reorganization of meat merchandising, noted that the major packers have been caught in a squeeze. In the past, the livestock marketing cycle has featured periods of glut. Plants were built to be able to handle that glut. Now that the cycles have been smoothed out, packers find themselves with only part of their capacity utilized during most of the year. Prices go up in an effort to attract more animals for the killing lines. This in turn, however, raises the prices at the retail level and causes reduced consumer demand.

The packer is caught in the middle, Dr. Shannon said. He must not pay too much for livestock. If he pays too much, he winds up with red meat on his hands that he can't sell at the price he must have.

Policy Decisions

"In the past, policies of the big packing companies have been controlled by the production people. Buying was not based on what could be sold, but rather what could be produced. We are changing this to put the policy decisions of Cudahy into the hands of the marketing people," he said.

Dr. Shannon noted that in the past 10 years there have been many changes in this country that have influenced meat merchandising. Among them he listed: (1) Growth of the supermarket and the concentration of buying into the hands of a few big buyers with considerable leverage. (Packers must know their costs exactly in order to be in a stronger selling position, he said.) (2) Growth of self-service meat merchandising. (3) An American economy that has been maintained at a high level. (4) Growth of new homes, new people and new ideas. The housewife of today prefers to choose the cut of meat she wants at the price she can pay in the self-service meat counter, rather than ask a butcher. (5) Development of improved refrigeration facilities in packing plants, transportation and stores for handling meat. (6) Changes in the production of livestock, with the bigger producer of today more scientific and a far better businessman than the small producer of earlier years.

In answer to a question, Dr. Shannon noted that Cudahy does operate some feed lots in specific locations where that is the only practical way for them to get the type of animal they want, but he indicated that growing out animals is a specialized job that Cudahy would like to leave to the livestock producers.

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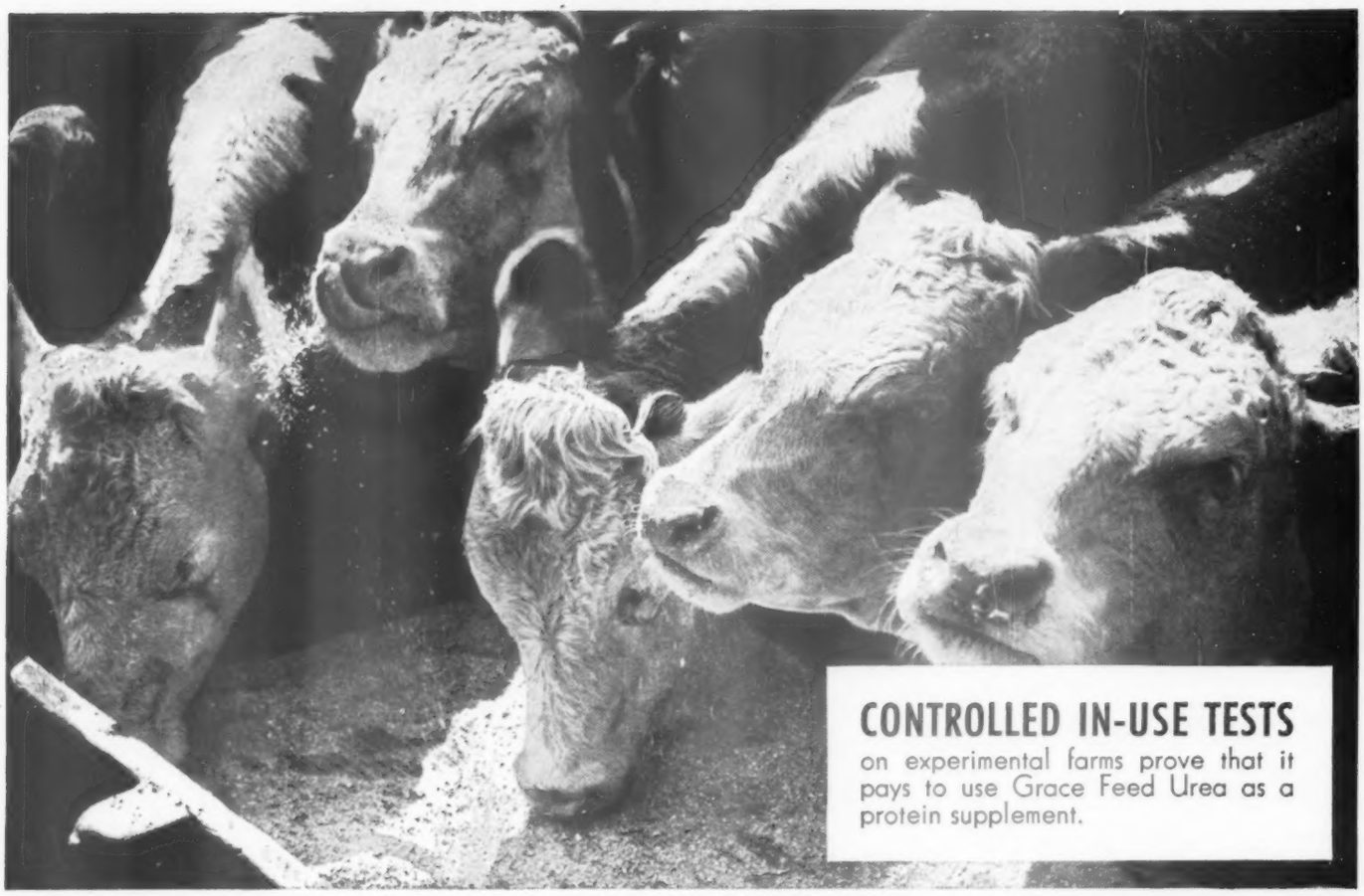

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Grinding, Mixing Service Can Up Dealer Volume But Approaches Vary, Dealer Panel Indicates

By RUSSELL TOKHEIM
Feedstuffs Staff

CEDAR RAPIDS, IOWA—Grinding and mixing services can help increase business volume for feed dealers, but this type of operation can be reached by a number of roads.

That was indicated by five feed dealer members of a panel on grinding and mixing at the annual Kent Feeds Grinding and Mixing Seminar held here. All five dealers said that grinding and mixing service has increased their business volume. However, the ways they entered the grinding and mixing business varied greatly. One operates a completely new mill; another manages an elevator firm which invested just $3,739.14 in equipment and installed it in an unused portion of one of its elevator buildings. Another member of the panel does his grinding and mixing in "church." He purchased a frame church building which was to be moved and transplanted it to his grain business site along the railroad. He says he has found the high-ceilinged structure works out well for housing his mill equipment.

Four of the five panel members said that their firms operate grain banks and find them to be definite assets in building and holding business.

The interested audience for this and other portions of the day-long program consisted of 300 Kent Feeds dealers and other guests. Indoor and outdoor exhibits of milling, bulk storage and delivery equipment dotted Hawkeye Downs, home of Cedar Rapids' All-Iowa Fair.

Answering questions posed by the moderator, members of the panel on grinding and mixing spelled out for fellow dealers many of the details of their custom milling and grain banking operations. (A report on another panel discussion—covering mobile mills—will appear in the next issue of Feedstuffs.)

Topics Covered

The grinding and mixing panel answered questions on various aspects of mill operation and management, including:

—Charges for grinding, mixing and other services.

—Average daily volume.

—Facilities for grinding, weighing and storage.

—Typical day's operation; manpower used.

—Bulk bin facilities for concentrates and finished feeds.

—Delivery operations.

—Grain banking practices, including restrictions on grain accepted, in and out charges, policy on removal of grain, record systems, policy on overdrafts, shrinkage with banked grain, effect of grain bank service on business volume.

—Distance of customers from mill.

In charge of arrangements for the question answering seminar for feed dealers was Roy Luce, Kent's sales training director. Moderator for the grinding and mixing panel was Richard Severson, newly-appointed manager of a new plant to be opened by Kent in Waterloo, Iowa, this summer. Master of ceremonies was W. F. Schafenacker, vice president and sales manager of Kent Feeds, Inc., which is headquartered in Muscatine, Iowa, and also has a plant in Sioux City, Iowa.

Panelists were: Ralph Parrish, Parrish Feed Service, Osco, Ill.; Clarence Kruse, Holland Grain Co., Holland, Iowa; Earl Palmer, Federal North Iowa Grain Co., Webb, Iowa; Vince Phillips, Bloomington Produce, Bloomington, Wis., and Fred Miller, Miller Feed Service, Oakland, Ill.

Each man showed colored slides of his place of business and equipment and gave a description of the operation.

Feed Business Up

The first question to the group was: **"Do you feel that your grinding and mixing services have helped increase your feed business?"** The answers follow:

Miller: Obviously it has. Our tonnage increased 40% last year and we expect this year to be even better. And, of course, it has helped our profit picture. (In conjunction with the Miller Feed Service at Oakland, Ill., Mr. Miller and his brother, Max, operate a "hog motel" which was featured in Feedstuffs, May 6, page 119.)

Kruse: Yes, our poultry and hog tonnage has increased considerably. And our profit per ton handled has also increased. (Mr. Kruse operates the mill in the former church.)

Palmer: Definitely. Our hog feed tonnage, for example, has increased about four times since we installed the mill. And our profits have increased in the same proportion. (Mr. Palmer's firm installed a custom feed mill in some unused space at a total investment of $3,739.14. Mr. Palmer says the equipment will pay for itself this year.)

Parrish: We feel that the only future in the feed business is in grind and mix facilities. As competitive as business is today, grinding and mixing equipment will increase business and, in turn, profits. (Mr. Parrish operates a new mill.)

Phillips: Definitely. Without it we wouldn't have any business. And, of course, it has increased our profits because we are selling more concentrates.

Panel members were asked: **"What are your charges for grinding and mixing, cracking, rolling, hulling, shelling, drying, etc.?"** Their answers follow:

Miller: We get 10¢ cwt. for all grinding, either coarse or fine, and 3¢ bu. for drying.

Kruse: We charge 12¢ cwt. for grinding, either coarse or fine. On drying, we get 5¢ for the first percentage point of moisture and ½¢ for each point over one. On delivery, we charge $1 per load.

Palmer: We get 10¢ cwt. for all grinding and $2 per load for delivery.

Parrish: We get 12¢ for coarse grinding and 16¢ cwt. for fine grinding. We get 10¢ for cracking and 14¢ for rolling oats. On hulling, we charge 22¢ and 5¢ for shelling. On drying, we charge 1¢ per percentage point of moisture with a minimum charge of 5¢. On delivery, we charge $2 for the first ton and $1 per ton on the rest with a minimum charge of $5.

Phillips: We get 12¢ cwt. for grinding, either coarse or fine and 5¢ for shelling. On drying, we charge 1¢ per point of moisture.

Own Supplements

Questioned as to **whether they charge more for grinding and mixing if the farmer brings his own commercial supplements,** the panelists gave the following answers:

Miller: No.

Kruse: Yes, we do. We charge additional for mixing—a straight 15¢ for grinding and mixing.

Palmer: No.

Parrish: Yes, we do. We charge additional for mixing.

Phillips: We don't allow it.

Daily Tonnage

The five panel members gave the following figures for their **high day and average daily volume:**

Miller: Twenty tons is our high day peak, with the average about 10 tons.

Kruse: Our high day tonnage is about 60 tons with the average about 20.

Palmer: Our high day is about 25 tons with 15 tons about average.

Phillips: On our high day we will hit about $5,000, with the average day running about $1,200.

Grinding capacities were given as follows: Miller, 10 tons per hour; Kruse, three tons in 30 minutes; Palmer, 25 tons per day; Parrish, 60 tons per day, and Phillips, 21,000 lb. per hour.

Hammermill size and type for each of the mills follow:

Miller: Forty horsepower Bryant, 18 in.

Kruse: Twenty inch J-B Sedberry 75 h.p. grinder with 25 h.p. blower.

Palmer: Feeders Friend 15 in. mill.

Parrish: Prater 100 h.p. mill.

Phillips: Jacobson 18 in.

"What facilities do you have for weighing of grain and concentrates for your mixed feeds?" Answers follow:

Miller: A weigh buggy and a truck scale.

Kruse: A weigh buggy.

Palmer: Hopper scales.

Parrish: We use a ½-ton weigh buggy.

Phillips: A weigh buggy.

Grain Storage

Grain storage capacities for the five operations varied greatly, it was indicated by the answers to the question: **"How much grain storage do you have?"**

Miller: Seven thousand bushels of corn and 150 bu. of oats.

Kruse: Up to 40,000 bu.

Palmer: Three hundred and fifty thousand bushels, including government storage.

Parrish: Twelve thousand bushels.

Phillips: Twenty-five thousand bushels.

Typical Day's Operation

Each of the five men described a typical day's operation for his firm.

Mr. Miller said that Miller Feed Service operations start at 6:30 to 7 a.m. and the day ends at 5 to 5:30 p.m., depending on the season. He and his brother have a full-time salesman and a part-time man during peak season as well as interchangeable help from a 600-acre farm operated in addition to the feed business and hog motel. He said that farmers usually don't have to wait at all for grinding and mixing.

Mr. Kruse said his firm operates from 7 a.m. to 5:30 p.m. with five men working or available to help out in the mill. These persons are a mill man, a delivery man, a man who works in the country except on busy days at the mill, an office man and a man in the elevator. On the waiting time for grinding and mixing service, he said, "Very seldom do the farmers have to wait."

Mr. Palmer commented that the firm he manages is open from 8 a.m. to 5 p.m. and that the help consists of a mill man and a delivery man in addition to himself. Waiting time at the mill varies, but is not too long, he stated.

Parrish Feed & Service operates from 7 a.m. to 5 p.m. with "one mill operator and one part-time helper in addition to my partner, Don Wellborn, and me," Mr. Parrish said. Waiting time for grinding and mixing service varies by season, but is not over a half hour, he commented.

Mr. Phillips said his firm is open from 7 a.m. to 6 p.m. and that the crew consists of a bulk truck driver, a delivery man and two men in addition to himself. Time to wait for grinding and mixing service ranges from none to not over a half hour, he indicated.

Bin Facilities Vary

Bulk bin facilities for concentrates and finished feeds varied as much as other factors in the operations of these five businesses. Mr. Palmer and Mr. Phillips both indicated their firms have neither bulk bins for concentrates nor bulk bins for finished feeds.

Mr. Miller said the mill he and his

GRIND AND MIX PANEL—The grinding and mixing panel at the Kent Feeds Grinding and Mixing Seminar held in Cedar Rapids, Iowa, and the moderator are shown above. At the left is Richard Severson, moderator and manager of the new Waterloo, Iowa, plant of Kent Feeds. Panel members are, from the left: Vince Phillips, Bloomington Produce, Bloomington, Wis.; Earl Palmer, Federal North Iowa Grain Co., Webb, Iowa; Clarence Kruse, Holland Grain Co., Holland, Iowa; Ralph Parrish, Parrish Feed Service, Osco, Ill., and Fred Miller, Miller Feed Service, Oakland, Ill.

DISPLAY AREA—A wide variety of grinding and mixing, bulk handling and grain bank equipment was on display at the fairgrounds in Cedar Rapids, Iowa, as Kent Feeds, Inc., Muscatine, Iowa, held its annual Grinding and Mixing Seminar recently. Here some of the persons attending the seminar are shown looking over equipment in one of the display areas.

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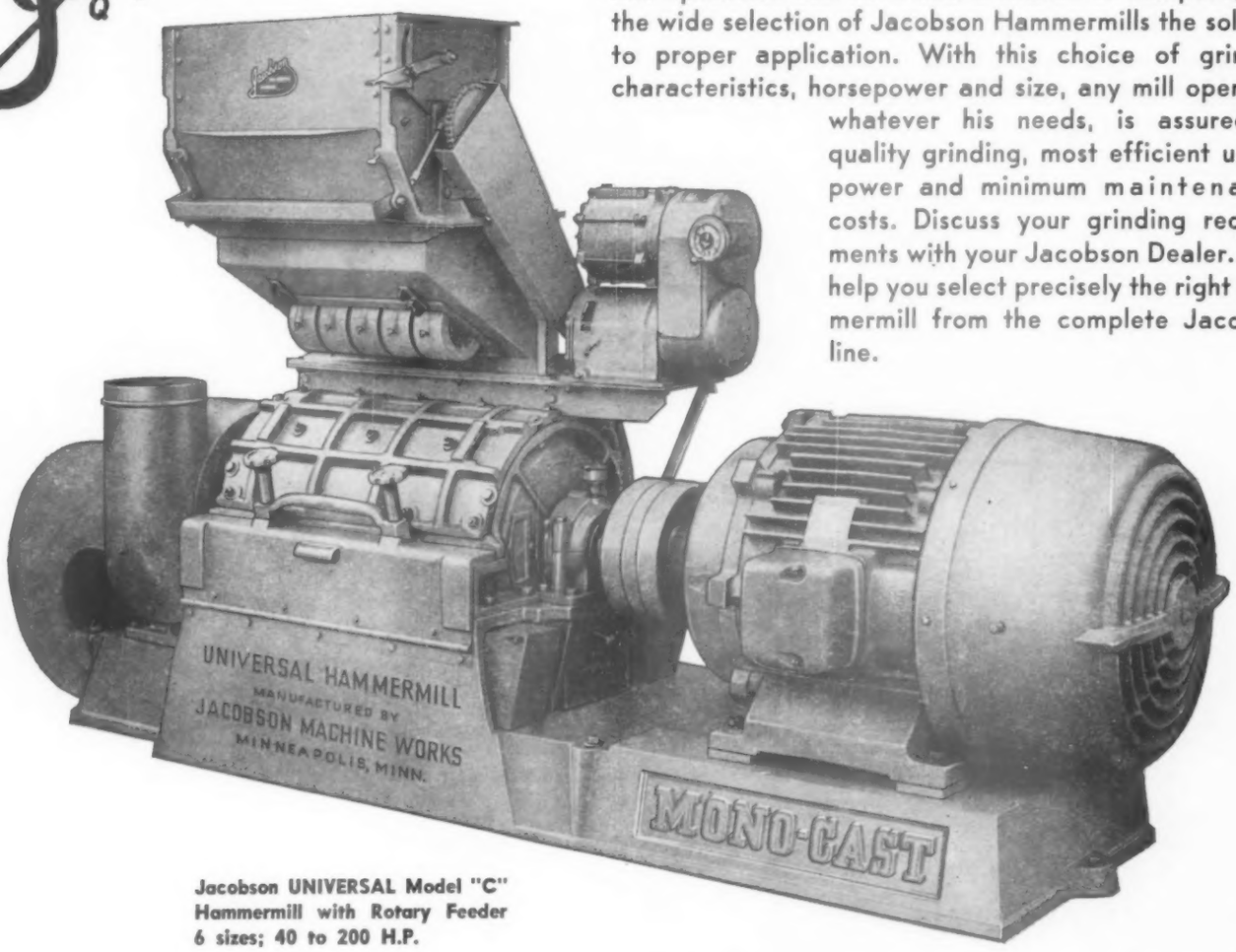

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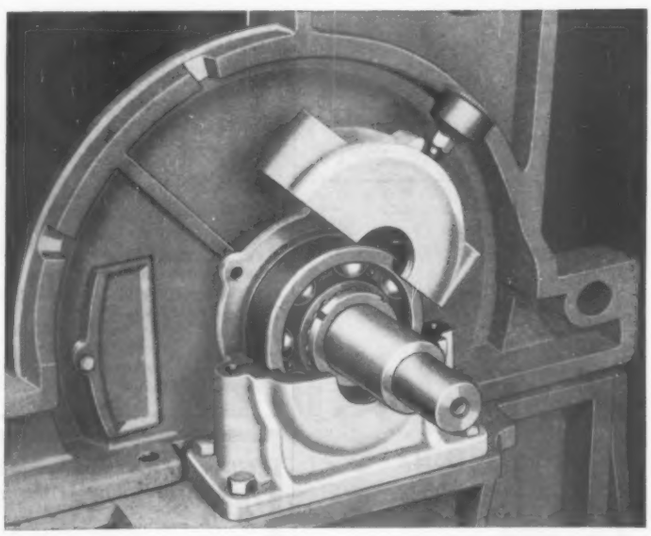

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brother operate has two seven-ton bins and two 15-ton bins for concentrates. There are none for finished feeds.

Mr. Kruse said his mill has two four-ton bins and eight five-ton bins for concentrates and four six-ton bins and two holding bins of three tons for finished ground and mixed feeds.

Mr. Parrish stated, "We have 18 one-ton bins and five three-ton bins" for concentrates and "four holding bins of 10 tons each over the scales" for finished feeds.

Delivery Operations

Turning to delivery problems, the men were asked **"What kind and size bulk truck do you have?"** Their replies were:

Miller: We have no bulk truck as such, although we do have an auger wagon that will hold three tons.

Kruse: We have a six-ton Pamco unit that will reach 21 ft. in the air. It is divided into three compartments. One compartment will hold slightly over thee tons and the other two will hold slightly over one ton each.

Palmer: We don't have an auger-type bulk truck, but we do deliver bulk by pulling a portable elevator behind our delivery truck. This elevator will reach 16 ft. in the air. The truck, itself, is divided into two compartments.

Parrish: We have two bulk trucks, a Pamco four-ton unit that will reach 14 ft. in the air and a Pakmaster six-seven-ton unit that will reach 20 ft. The Pakmaster has three two-ton compartments.

Phillips: We have a Henderson seven-ton unit that is divided into two compartments.

The amount of use these delivery units see varies greatly too. Two of the men said their firms deliver about 90% of the feed. Two others said that farmers haul 95% of their own feeds.

Mr. Miller indicated that farmers haul 95% of their own feed and that his firm gives no discount to farmers for doing this.

Mr. Kruse said his firm hauls about 90% of the feed with its truck. He said that there is no discount offered for farmers hauling their own but did point out that there is a charge for the firm's delivery service.

Mr. Palmer commented that his firm hauls about 90% of the feed although a discount of $2 per load up to five tons is offered.

Mr. Parrish stated that delivery varies with the season. During the busy season his firm delivers 75% of the feed and about 50% during the slower times. That firm offers no discount to farmers for picking up their own ground and mixed rations. But, he commented that a discount of $1 per ton on Kent supplements is offered if farmers haul their own.

Mr. Phillips said that farmers haul about 95% of the feed from his mill and said that no discount is offered. He says that 90% of his feed is bagged off.

On the question of filling feeders directly from the bulk truck, just one man, Mr. Miller, said his firm does not provide this service. The other four men said their firms do and that it is an attraction to the farmers.

Two of the five men said their mills do not sell molasses. Mr. Parrish and Mr. Phillips both said their firms sell molasses and have bulk storage tanks. Mr. Kruse said he sells some dry molasses.

Grain Bank Service

Turning to grain bank service, four of the five men said their mills do have grain banking service. Mr. Palmer said his firm does not offer this service. All four of the grain banking firms have their own drying equipment. Mr. Phillips' firm's grain bank is unusual in that it consists of individual bins which customers rent. Unloading equipment is available at the site and farmers withdraw grain. He reports that farmers who do not want an entire bin have been going together and sharing one.

The four men representing the grain banking firms were asked: **"What restriction do you put on the kind of corn and oats accepted?"** Their answers were:

Miller: It has to be 18% or less (moisture) without discounting it to dry. We will accept only good oats.

Kruse: Corn has to be No. 2 qual-

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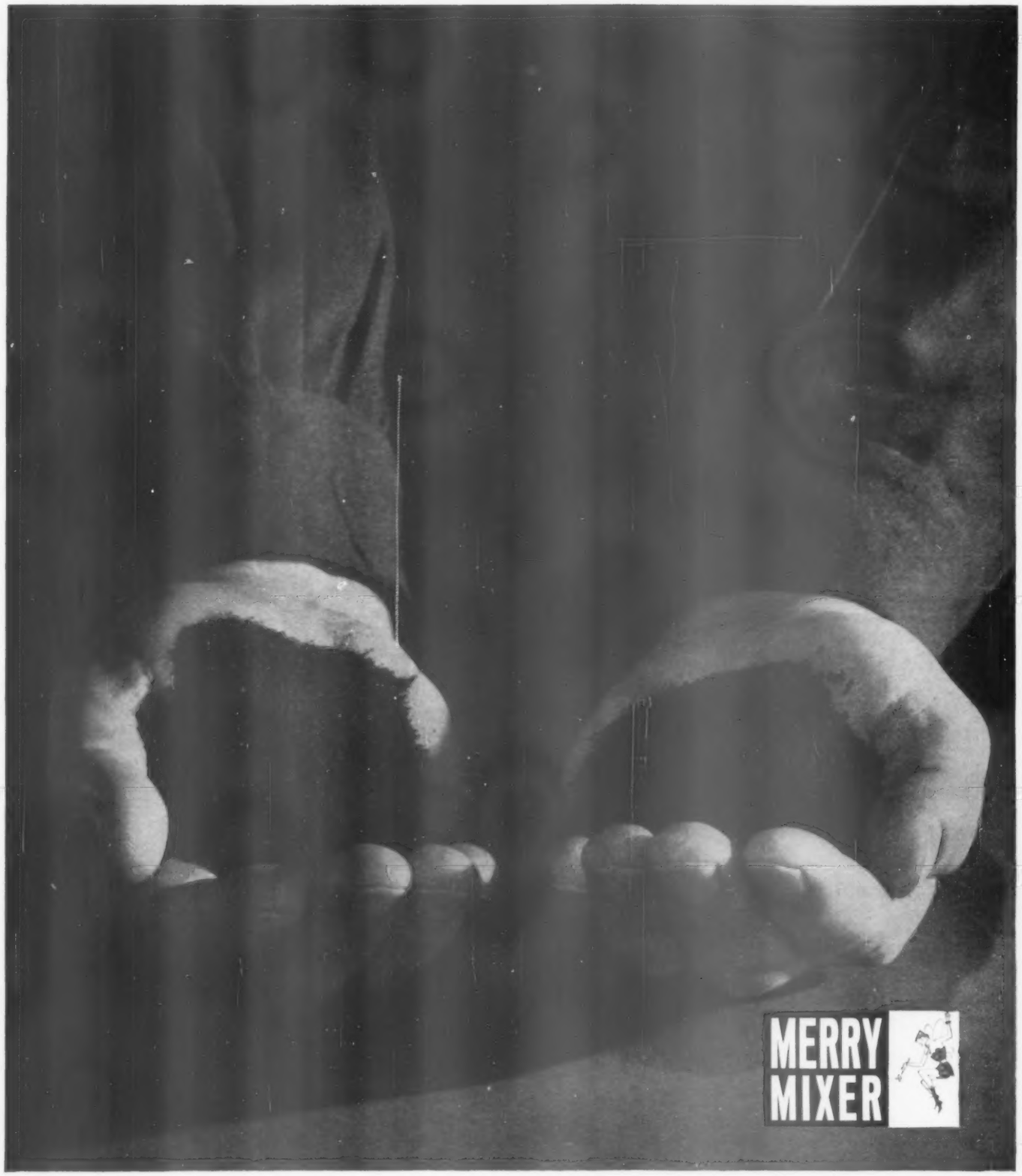

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CHAMPION MOBILE GRINDER AND mixer mills. Champion Portable Mill Co., 2106 Como Ave. S.E., Minneapolis 14, Minn.

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P.O. Box 574, Jefferson City, Mo.

FOR SALE—GEHL (17A) MOBILE FEED unit. Good condition. $500. Emcil Mills, Route 4, Mt. Vernon, Ohio; Phone EX 2-1876.

TWO NEW CHARIOTS WITH 15:50-20 tires. Two Fox choppers. Two Roberts hay choppers, one mounted on trailer with truck. M & R Sales Co., Gothenburg, Neb.; JE 7-2451.

MOBILE MILLS, NEW, USED AND FAC-tory rebuilts. Complete with grinder, mixer, diesel, molasses. Financing available. Iowa Portable Mill Co., Oelwein, Iowa.

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One 1960 Pak-Master model 30 bulk unit. Two compartments, 7 ton capacity. This unit in good shape. Mounted on 1960 F-600 Ford heavy duty V-8 engine. Heater and defroster, 2-speed axle, 8.25x20 fair tires. Body painted and mechanically very clean. Approximately 59,000 miles. Truck carries 30-day, 100% guarantee on majors.

Was	Until June 30
$4,000.00	$3,565.00

One Bulkanizer (Dodgen), model 12T-SD factory reconditioned. Carries a new 90-day warranty, two compartments, 6 ton capacity, mounted on 1959 GMC 350 series, big 6 engine, 2-speed, real good 8.25x20 tires, mud and snow rear duals. Spotless in and out and has had best of care. 30-day guarantee on majors.

Was	Until June 30
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One Pamco bulk and bag body, 13 ft. bed, auger thru center of box with 3 traps. Good operating condition. Mounted 1958 Chev. 2 ton with big 6 engine, 2-speed, has real good rubber 8.25x20. New paint job. Truck is real good mechanically and way above average for 1958. Truck carries 30-day full guarantee on majors.

Was	Until June 30
$2,745.00	$2,500.00

Also one 1957 Henderson Chief 10 ft. body, reconditioned, repainted. Was $1,100.00; now $950.00. Simonsen side and loading auger system, 13 ft. knapheid box. Was $600, now $500. One Bulkanizer (Dodgen) 12T-SD factory reconditioned 12 ft. all bulk. Was $1,295.00, now $1,200.00. Several other close outs. Call or come see.

DODGEN INDUSTRIES
Phone: 1357 Humboldt, Iowa

ity. We will accept only oats of milling quality.

Parrish: Only No. 2 is desirable; however, at times we have had to separate inferior corn. On oats, only good quality and weight are accepted for the bank.

Phillips: Corn has to be No. 2 grade. We have no restrictions on oats.

'In' Charges

Next they were asked: **"What 'in' charges do you assess against bank patrons, and how long a supply of grain do you accept in the bank?"**

Miller: We have no "in" charges and no limit on the amount of grain that patrons can deposit in the bank.

Kruse: We have no "in" charges, but we do have a limit of 60 days supply of grain that can be deposited by any one farmer.

Parrish: One per cent of the dried grain intake is figured as the "in" charge. We try to hold the limit of grain deposited to a 60-day period, but it will depend on our capacities at the time.

Phillips: We charge 1¢ per bushel per month. We have no set figures on the amount of grain that can be deposited in the bank. It depends on the customer.

Removing Grain

The next question fired at the panel was **"Do you allow a feeder to remove grain from the bank? If you do, do you charge him an 'out' charge?"**

Miller: Sometimes we will allow a feeder to remove grain from the bank. We don't charge him for this, but perhaps we should.

Kruse: Yes, we allow it, but we charge him for it too—5¢ bu. plus storage.

Parrish: Yes, we allow it, too; but we also charge for this service—2¢ bu.

Phillips: Yes, we do, but we don't charge them for it.

The next question was: **"Do you accept custom grinding and mixing jobs? If so, do you charge the same or more than you charge regular bank patrons?"**

Miller: Yes, we accept custom grinding and mixing jobs. We charge the same as we do for our regular bank patrons.

Kruse: Yes, we accept regular custom grinding and mixing jobs. If they are using Kent concentrates we charge the same as we do our regular bank patrons.

Parrish: Yes, we do. The charges are the same as for our regular bank patrons.

Phillips: Yes, we do, charging them the same as our regular bank customers.

Grain Bank Records

Considerable interest developed in the audience over **bookkeeping systems used with the grain banking service.**

Mr. Miller said that he keeps a record by posting all orders on a ticket, then transferring this information to a card file kept for each customer. A column on the bookkeeping file cards shows the number of pounds of the patron's grain used and how much his account might be short or the balance.

All the figures appear when a photo-copying machine is used at the end of the month for making statements. Mr. Miller says the system has cut billing time from up to two days to 40 minutes. And, advertising promotion of the new bookkeeping system brought in 10 new customers too, he reports.

Mr. Kruse said he uses a smaller ticket than regular charge tickets to avoid confusion. When feed is delivered, it is recorded in the customer's account file. A delivery slip is taken out with each load.

Mr. Parrish said that his system includes recording date, ticket number, corn, oats, supplement and molasses used as well as type of process.

Mr. Phillips commented that his

firm keeps a record for all grain bank patrons using a regular card system.

Overdrafts

All four grain banking operations will permit overdrafts. With the limited amount of storage space that he has, Mr. Parrish says that someone is always overdrawn, but that it is no cause for concern if grain banking customers are carefully chosen in the first place. Mr. Miller said his firm has no limit on time allowed patrons to deposit grain to cover overdrafts. Mr. Kruse said he allows overdrafts only as long as weather prohibits shelling corn. Mr. Parrish said he allows 10 days and Mr. Phillips 30 days. None reported making any charges for delays beyond the deadline for paying overdrafts.

All four firms allow a patron with no grain to pay an overdraft to purchase grain to cover this overdraft. In each case the current market price is charged.

Shrinkage

The men were asked: **"How much shrink do you have with the banked grain? And, does the feeder allow you shrinkage or do you have your handling charge high enough to cover shrink losses?"**

Miller: As far as we know, we don't have any shrink.

Kruse: I can't tell what the shrink is running.

Parrish: We feel 1% shrink is ample. Our handling charges cover this.

Phillips: I don't know, but we figure 2% shrink on the grain bank corn.

All four firms report keeping cost records for grain bank patrons. Mr. Parrish indicated that he keeps them posted on the firm's bulletin board and plans to use some of them in local advertising in the future.

Profits Increased

Final question posed on grain banking was: **"Do you feel that grain banking has helped increase your feed business and profits?"** The feed men's comments follow:

Miller: Yes, farmers definitely like the convenience.

Kruse: Yes, as we pointed out before, it has increased our hog and poultry tonnage considerably and, indirectly, of course, our profits.

Parrish: Here again, we feel that with an eye to the future, the grain bank has built our business and has enabled us to hold our business. We also feel that the grain bank has helped increase our profits and should continue to grow.

Phillips: It definitely has helped our business as it more or less ties up a customer's business.

Area Served

The panelists were also asked what percentage of their customers are within five miles and 10 miles of the mills.

Mr. Miller said that 50% are within five miles, 40% more within 10 miles and the remaining 10% beyond 10 miles.

Mr. Kruse said that 75% of his customers are within five miles and the remaining 25% are within 10 miles.

Mr. Palmer said that 90% of his firm's business is within five miles and the remainder within 10 miles of the mill.

Mr. Parrish stated that 60% of his customers are within five miles and an additional 35% within 10 miles, and about 5% are beyond 10 miles.

Mr. Phillips said 70% of his customers are within five miles and the remaining 30% within 10 miles.

SILVER GOLF TROPHY PRESENTED—A highlight of the banquet at the mid-summer meeting of the Indiana Grain & Feed Dealers Assn., at French Lick, Ind., June 4-6, was the presentation of the Fred K. Sale championship golf trophy by the National Molasses Co., Oreland, Pa. Lester P. Fisher, vice president, National Molasses Co., who made the presentation to Addis O. Thomas, association president, said the trophy was intended as a tribute to Mr. Sale's long and devoted service to the feed and grain industries. A plaque on the base of the 2-ft. high silver trophy was inscribed: "FRED K. SALE Golf Championship Trophy Awarded Annually in Recognition of His Continuing Service Since April 15, 1929, as Secretary of the Indiana Grain & Feed Dealers Assn., Inc. Contributed by National Molasses Co., Oreland, Pa." The trophy will remain permanently in the office of Mr. Sale. Winners of the annual mid-summer golf tournaments will have their names inscribed on the trophy. The first name to be inscribed will be Sherrell W. Johnson, Jr., Johnson Feed Supply Co., Sullivan, Ind., who posted a 75 low gross at the 1961 outing. The first photo, from left to right, shows Mr. Thomas, Mr. Sale and Mr. Fisher. In the second photo are Mr. Johnson, left, and Mr. Sale.

Officers Elected by Stockton Exchange

STOCKTON, CAL.—Members of the Stockton Grain Exchange have elected Clem Clark, Ralston Purina Co., as president for the coming year.

Other officers elected during the annual meeting of the exchange were: Jack Harley, Stockton Elevators, vice president; Jack Schuler, E. D. Wilkinson Grain Co., treasurer, and Clyde Parker, secretary-manager.

Elected to the board of directors were Ivan Brown, E. D. Wilkinson Grain Co., Stockton, and Milt Woods, Adams, Schwab and Adams, Woodland. Hold-over directors are Gerald Swenson, Continental Grain Co., French Camp, and Francis Young, F. B. Young Grain Co., Stockton.

In conjunction with the group's annual meeting, the California Hay, Grain & Feed Dealers held an Upper San Joaquin Valley district meeting. Speaker for the meeting was Dr. Fred N. Briggs, dean of the College of Agriculture, University of California, Davis. His subject was "Agriculture in California, Present and Future."

Market Center Opens

DES MOINES—The Iowa Farm Bureau Federation's sixth livestock marketing center opened June 5 at the former Barton Yards in Elkader, Clayton County. Elvin Larson of Tipton, who has been a trainee for several months, is the manager.

Gene Stadel, Iowa Farm Bureau marketing director, announced that the Elkader center will be open daily Monday through Friday for the marketing of hogs, and that Clayton County farmers can consign livestock through the marketing center for the Farm Bureau livestock auction market at Waukon.

The Iowa Farm Bureau's other livestock marketing centers now in operation are located at Tipton, Washington, Grinnell, Allison and Waukon.

Farm Commodity-Feed Price Ratios Drop in May

WASHINGTON—Across the board, farm commodity-feed price ratios were lower in May than a month earlier; and the May ratios of chicken, turkey and egg prices to feed prices also were lower than in the same month a year earlier, U.S. Department of Agriculture information shows (see accompanying table).

While prices of all species of meat animals, dairy products and eggs declined from April 15 to May 15, prices paid by farmers for feed rebounded from the April decline. The May 15 feed price index of 199 was the highest for the year, and for the first time in 1961 the feed index was higher than in the same month a year earlier, USDA reported.

The index of prices received by farmers dropped slightly more than 1% (3 points) to 236% of its 1910-14 average during the month ended May 15, USDA said. May was the fourth consecutive month in which the index of prices paid by farmers for commodities and services, including interest, taxes and farm wage rates, was recorded at the all-time high level of 302.

Farm Commodity-Feed Price Ratios

	U.S.	New Eng.	Mid-Atl.	East North Cent.	West North Cent.	South Atl.	East South Cent.	West South Cent.	Mount.	Pac.
CHICKEN-FEED—										
Farm Chickens:										
May, 1961	3.3	3.5	4.3	3.4	2.6	3.3	3.5	3.3	3.4	2.2
April, 1961	3.8	3.8	4.5	3.9	3.1	3.8	3.9	3.5	3.3	2.4
May, 1960	3.9	4.8	4.7	4.0	2.9	4.0	3.7	3.2	3.3	2.8
Average (1950-59)	5.0									
Average (May, 1950-59)	5.3									
Broilers:										
May, 1961	3.0	3.4	4.1	3.2	3.4	2.9	2.9	3.1	3.5	3.2
April, 1961	3.2	3.4	4.1	3.5	3.5	3.2	3.1	3.2	3.8	3.4
May, 1960	3.8	4.1	4.6	4.1	4.1	3.7	3.5	3.8	3.9	4.0
TURKEY-FEED—										
May, 1961	6.3	7.3	8.2	6.6	7.2	6.2	6.5	6.2	6.3	5.6
April, 1961	6.6	7.7	8.3	6.8	7.4	6.3	6.9	6.5	6.5	5.8
May, 1960	7.7	7.7	8.7	8.1	9.1	7.1	7.6	7.0	7.4	6.9
Average (1950-59)	8.0									
Average (May, 1950-59)	7.7									
EGG-FEED—										
May, 1961	9.4	10.5	9.6	9.1	9.7	9.5	10.5	9.8	9.6	8.3
April, 1961	10.0	12.0	10.4	9.7	9.8	10.6	11.3	10.2	9.9	8.4
May, 1960	9.7	12.1	10.1	9.2	9.8	10.2	10.1	9.4	9.4	8.3
Average (1950-59)	10.7									
Average (May, 1950-59)	9.3									

	U.S.	North Atl.	East North Cent.	West North Cent.	South Atl.	South Cent.	West
MILK-FEED—							
May, 1961	1.33	1.18	1.35	1.47	1.54	1.42	1.30
April, 1961	1.37	1.22	1.39	1.51	1.62	1.47	1.35
May, 1960	1.30	1.19	1.30	1.41	1.54	1.38	1.27
Average (1950-59)	1.31						
Average (May, 1950-59)	1.16						
BUTTERFAT-FEED—							
May, 1961	25.2	...	20.7	26.8	...	17.1	19.2
April, 1961	25.5	...	21.1	27.2	...	17.2	19.2
May, 1960	24.3	...	20.6	26.4	...	16.1	18.6
Average (1950-59)	22.4						
Average (May, 1950-59)	21.8						

	U.S.	North Cent.
HOG-CORN—		
May, 1961	15.7	15.9
April, 1961	17.5	18.1
May, 1960	14.4	14.8
Average (1950-59)	13.7	14.1
Average (May, 1950-59)	13.8	13.7

NOTE: Ratios computed at mid-month by U.S. Department of Agriculture. Ratios represent number of pounds of poultry feed equal in value to 1 lb. live farm chicken, turkey or 1 doz. eggs; pounds broiler growing mash equal to 1 lb. broiler; pounds concentrate rations equal to 1 lb. milk or butterfat; bushels of corn equal to 100 lb. hog. Increases in ratios are favorable to the feeder.

KEY TO GEOGRAPHICAL DIVISIONS

Here is a guide to the states included in the geographical divisions listed in the accompanying commodity-feed price ratios:

New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Mid-Atlantic: New York, New Jersey, Pennsylvania.

North Atlantic: New England and Mid-Atlantic states combined.

East North Central: Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

North Central: Combination of the two foregoing.

South Atlantic: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

West South Central: Arkansas, Louisiana, Oklahoma, Texas.

South Central: Combination of the two above.

Pacific: Washington, Oregon, California.

Mountain: Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Montana.

West: Combination of the two above.

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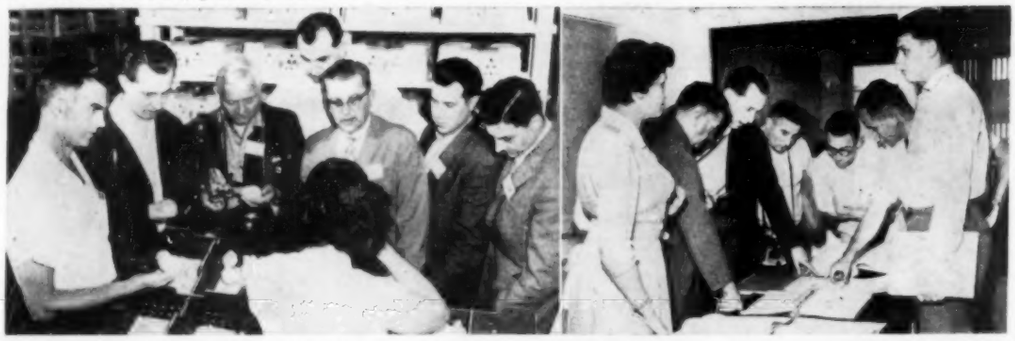


EUROPEAN POULTRY EXPERTS—As a part of playing host to 82 visiting West European poultry experts, Hy-Line Poultry Farms, Des Moines, conducted a series of tours of the firm's research facilities at Johnston, Iowa. In the photo at the left, H. B. Wallace, far left, general manager of the firm, explains the method of sexing chicks. In the photo at the right, Dr. Larry Baker, second from the right, statistical analyst, points out pedigree records to one of the small tour groups.

Visitors Outline Poultry and Feed Trends in Europe

By RUSSELL TOKHEIM
Feedstuffs Staff

DES MOINES — Emphasis was placed on the importance of better feeds and management as a group of West European hatcherymen interested in poultry genetics toured the facilities of Hy-Line Poultry Farms near here and poultry operations in Iowa, Arkansas and Indiana.

H. B. Wallace, general manager of Hy-Line, said, "We want to show these people what better feeds and management will do for the inbred qualities of Hy-Line Chicks."

The 82 members of the group paid their own expenses on the trip to the U.S. to become better acquainted with methods of breeding and raising chicks in this country. Represented in the group were hatcherymen from West Germany, Austria, Switzerland, France, Belgium and the Netherlands, plus a market research analyst and two veterinarians.

Acting as guides for the tour were Hy-Line and its western and central European distributor, The Hendrix Works, Boxmeer, the Netherlands.

June 14 the group of visitors boarded a chartered plane to return to Europe, marking the end of their 12-day trip. In addition to seeing the research facilities and hatchery of Hy-Line at Johnston, Iowa, near Des Moines, the group visited poultry operations in Iowa, Arkansas and Indiana to learn about housing, ventilation, confinement rearing, breeding, started pullets, hatchery management and vertical integration.

Rapid increases in poultry and egg production in West Europe are causing a similarly rapid increase in formula feed milling, it was pointed out by English-speaking hatcherymen who were on a panel for a press conference held for the visitors. It was indicated that a high percentage of the feed for the growing poultry industry is concentrates.

The panelists said that feed mills in West Germany face a big obstacle in that the government regulates formulation of feed. The panel members, all from West Germany, said that 90% of a mill's production must be of government regulated formula feeds while only 10% may be of non-regulated feeds. They indicated that this is a dampening factor on feed research.

Ralston Purina's entry into the West German market in conjunction with a German firm is having a big effect already, it was indicated. However, that firm, too, can produce only 10% of its feeds as it would like.

Corn is the most expensive ingredient of feeds produced in western Europe, the panel members said. They calculated that it costs $110 in U.S. money to import a ton of corn. Fish provides most of the protein in the feeds, although imported soybean for protein is also used.

Because of the high feed costs, the panelists said that feed as a percentage of the total cost of production is 80% there as compared with 55-60% in the U.S.

Like the West German feed manufacturer, the West German poultryman also has his problems, most of them unlike those in the U.S.

Because of the retarded development of the poultry industry attributed to World War II, production has not reached the point where price is a major point of competition. Eggs bring a price of 80¢ (U.S. currency) per dozen in West Germany and the demand is increasing rapidly as incomes rise and persons become more conscious of weight-gaining, according to the panelists.

However, the fear is that eggs coming in from behind the Iron Curtain could be dropped to "dump prices" to ruin Germany's poultry industry. The same fear prevails in the developing broiler industry in Germany, it was pointed out.

The West Germans said that they hold high hopes for the egg industry in their country. They said that the freshness factor in eggs gives them an advantage over imported eggs. However, they said that U.S. broiler production has reached the degree of development where, even with the transportation costs, frozen chicken produced in the U.S. can be sold in West Germany for less than the West Germans can produce it themselves.

Cooperative marketing organizations are being developed in the West German poultry industry and are a major factor in the growth of the industry. However, it was pointed out that West Europeans still need considerable consumer education. One of the hatcherymen said, "People still think if the eggs they get are dirty, they are fresh."

Most West German poultry operations are small in size, the panelists pointed out. The average laying flock in West Germany is 200-400 birds. Because of the labor shortages in that country, automatic feeding and watering equipment are in use even in the small operations. There are some poultry farms with 10,000 to 15,000 layers in the northern part of Germany, it was noted. But, the panelists said that the government encourages small operations by imposing a higher tax rate on operations when they reach a commercial size.

On the subject of broilers, it was pointed out that West German broiler producers are now marketing their birds at 2½ to 3 lb. in seven and one half to nine weeks. However, conversion rates are not as good as they would like them to be, the panel members said.

Among the added attractions of the West Europeans' visit were: A tour of an automatic feed mill at the Dubois Elevator Co., Dubois, Ind.; a chicken barbecue at Hope, Ark.; a visit to Pioneer Hi-Bred Corn Co., of which Hy-Line is a department, and a visit to a hog feeding operation.

Cattle on Feed Up 6% In California, Arizona

WASHINGTON—A total of 903,000 head of cattle and calves were on feed for market in Arizona and California June 1, according to the Crop Reporting Board, U.S. Department of Agriculture. This is 6% higher than May 1 and 6% above the 853,000 head on feed in these two states June 1, 1960.

Cattle and calves on feed for market in Arizona June 1 amounted to 201,000 head, 8% below a month earlier and 4% below the 210,000 head on feed June 1 last year.

Placement of cattle and calves on feed during May totaled 31,000 head compared with 60,000 head in May, 1960. Marketings of fed cattle at 49,000 head were up 4% from May last year.

A total of 702,000 head of cattle and calves were on feed for market in California June 1 this year, 12% higher than May 1 and 9% above the 643,000 head on feed a year earlier.

Cattle and calves placed on feed during May totaled 204,000 head compared with 207,000 head in May last year. Fed cattle marketings from California during May totaled 131,000 head, up 24% from May, 1960.

Turkey Day Planned At North Dakota State

FARGO, N.D.—Turkey Day will be held at North Dakota State University here July 12. In conjunction with the event, officials of the North Dakota Turkey Federation will present a turkey research building to the university.

The program announced by the university will also include three talks.

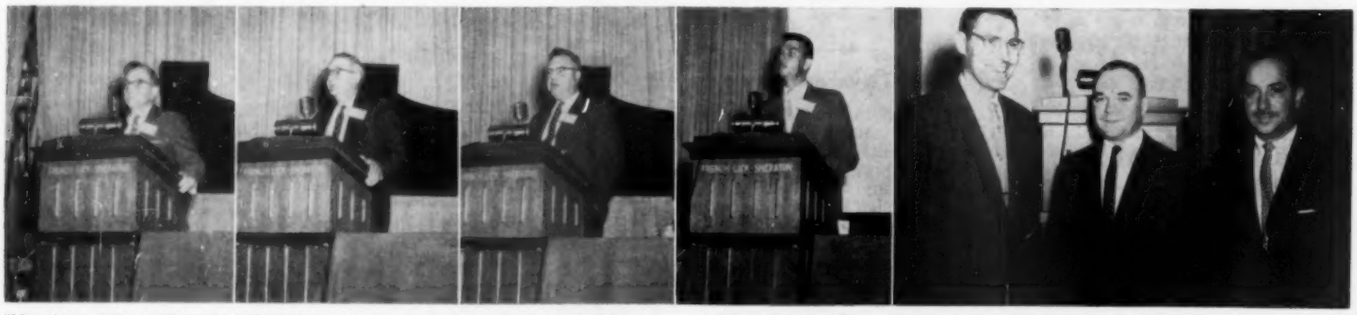
Dr. Reece L. Bryant, head of the North Dakota State University poultry department, will discuss the current research on barley as a turkey feed. Dr. Owen L. Thompson, head of the department of veterinary pathology, Dr. Salsbury's Laboratories, Charles City, Iowa, will speak on "Prevalent Respiratory and Intestinal Infections." Ken Nold, Osborne McMillan Elevator Co., Minneapolis, will discuss turkey feed programs and trends in turkey feeding.

There will also be open house at the turkey research center.

Store Manager Dies

SOUTH ROYALTON, VT. — Eugene W. Blaisdell, 41, manager of Eastern States Farmers Exchange Service Center here, died at his home. He served first as assistant manager of the feed store for about a year and became manager 10 years ago. Prior to this he had worked two summers and part time at the store.

He is survived by his wife and three children.



INDIANA MID-SUMMER MEETING—A number of timely topics of importance to the grain and feed industries were discussed at the mid-summer meeting of the Indiana Grain & Feed Dealers Assn. at the French Lick-Sheraton Hotel, French Lick, Ind., June 4-6. The first photo shows Dr. J. Holmes Martin, poultry department, Purdue University, Lafayette, Ind., who spoke on nutrition for poultry. Clarence R. Ring (second photo), field representative for production adjustment, state Agricultural Stabilization Conservation committee, Indianapolis, outlined the 1961 feed grain program. Elbert Odle (third photo), program specialist for storage, state ASC committee, Indianapolis, explained the need of new grain storage in Indiana. Pictured in the fourth photo is Dr. T. W. Freas, president, Indiana Veterinary Medical Assn., Veedersburg, Ind., who discussed veterinarian and feed dealer relations. The last photo shows Robert A. Gaylord (left), Elanco Products Co., Zionsville, Ind., who presented a film by Eli Lilly & Co., Indianapolis, entitled "A Time for Searching." A. E. Oliver (center), executive vice president, Grain & Feed Dealers National Assn., Washington, D.C., summarized legislative developments in Washington. T. C. Maraviglia (right) director, Cincinnati (Ohio) district, Food & Drug Administration, discussed grain and medicated feeds under FDA regulations.

AWARD

(Continued from page 1)

took place at the awards night program June 13 during ADSA's 56th annual meeting at the University of Wisconsin.

Dr. Emery has authored or co-authored 17 research papers presenting basic information beyond that obtained from common feeding trials, and which has already found practical application in various phases of dairy production. His teaching and research have emphasized studies in rumen function, digestion, microbiology and physiology. His original research has dealt extensively with rumen bloat, its causes, prevention and control; various physical and chemical activities in the rumen; urea utilization by ruminants; and the effects of various rumen chemical compounds on dairy animal growth, milk production and metabolism.

Born in Chicago, Dr. Emery did undergraduate work and received his M.S. degree at Colorado State University. He earned his Ph.D. degree at Michigan State University in 1955 and has been associated with the MSU staff since that time.

14th Recipient

Dr. Emery is the 14th scientist to receive the AFMA dairy research award since 1948. Previous winners, named by the American Dairy Science Assn., include: Dr. W. A. Hardison, Virginia Polytechnic Institute (1960); Dr. Harry R. Conrad, Ohio Agricultural Experiment Station (1959); Dr. Charles A. Lassiter, Michigan State University (1958); Dr. E. E. Bartley, Kansas State University (1957); Dr. J. C. Shaw, University of Maryland (1956); Drs. N. L. Jacobson and R. S. Allen, Iowa State College (1955); Dr. C. F. Huffman, Michigan State University (1954); Dr. J. W. Thomas, U.S. Department of Agriculture research center, Beltsville, Md. (1953); Dr. H. D. Eaton, University of Connecticut (1952); Dr. T. W. Gullickson, University of Minnesota (1951); Dr. J. T. Reid, Cornell University (1950); Dr. T. S. Sutton, Ohio State University (1949); and Dr. G. H. Wise, North Carolina State College (1948).

Two more $1,000 awards will be made this year by AFMA to the nation's top researchers. These recipients will be selected by the Poultry Science Assn. and the American Society of Animal Production.

SURVEY

(Continued from page 1)

giving-Christmas seasons, the Poultry Survey Committee anticipates that U.S. farm turkey prices during August-December will average 20-21¢, about a fourth less than the 25.3¢ average for the same period last year.

The committee's work is sponsored by the American Feed Manufacturers Assn. and two poultry groups.

Details of Forecast

Here are the details of the Poultry Survey Committee's latest economic forecast:

BROILERS—Modest price recovery is expected in the third quarter of July-September. U.S. prices for the period will average about 15¢ lb. Expected price improvement in the third quarter is based upon two factors. Marketings during the third quarter are expected to be approximately 10% greater than a year earlier compared to the 20% year-to-year increase in the second quarter. Also, demand for broilers is expected to show a normal seasonal increase.

If marketings in the October-December quarter are not more than 10% above a year earlier, prices for this period can average about 14¢. The size of the nation's hatchery supply flock would allow a much larger increase in the chick placements which will determine fourth quarter marketings.

In the coming winter, broiler production costs will be higher than those in the winter of 1960-61. Broiler prices and earnings will be lower than year earlier levels. If placement rates decline seasonally and continue only 4-6% above year earlier levels for the remainder of the year, U.S. average prices in the first half of 1962 would be restored to 15¢ lb. or better. However, if placements return to levels well above this 4-6% rate of year-to-year increase, unsatisfactory industry returns will be extended well into 1962.

Broiler prices in major southern supply areas usually average about 1¢ below the U.S. average on which this report is based.

EGGS—U.S. farm egg prices are expected to average about 35-36¢ doz. during the July-September quarter and about 38-39¢ during October-December. The expected third quarter prices will be about the same as a year earlier. Last quarter prices are expected to be 6-7¢ under those of the comparable period of 1960.

Egg prices in the first half of 1962 are expected to average 32-33¢, 2-3¢ under January-June, 1961.

Egg production during the third quarter of this year will be about the same as the third quarter of 1960. October-December production will be somewhat higher than a year earlier. The number of hens and pullets of laying age on Jan. 1, 1962, is expected to be about 2% above January of 1961. Therefore, egg production during the first half of 1962 is expected to be higher than year-earlier levels.

Egg stocks on June 1 were well below a year earlier. If the government continues to purchase the equivalent of about 100,000 cases of eggs per week, purchases during the third quarter of 1961 would about equal those of the same period of 1960.

However, if this rate continues into the last quarter of 1961, it will result in greatly increased purchases compared to 1960 and would lend strength to the fourth quarter price outlook.

Price predictions for the year ahead are higher than earlier expectations because the increase in the hatch of egg-type chicks during the first six months of 1961 was held to about 6%. The January-April hatch was 19% above the same period of 1960, but the May hatch declined sharply to below May of a year earlier. The hatch during the last six months of this year is expected to be slightly under the same period of 1960.

TURKEYS — About 25% more pounds of turkey than last year will be available for the Thanksgiving-Christmas seasons, and this is likely to mean that U.S. farm prices during August-December will average 20-21¢ compared with 25.3¢ for the same period last year.

Consumer income, an important demand factor, may be the same or slightly improved. However, competitive red meat and chicken will be lower in price. Storage carryover into the fall marketing season will be substantially above the 71 million pounds of Aug. 1, 1960. Feed costs for the present crop will be higher than last year.

Though prices may rise seasonally from August levels into the Thanksgiving and Christmas period, the increase is expected to be small. The timing and nature of government purchase programs can have an effect on the movement of prices during the season. The government has purchased turkeys during the past several years. However, because of the extremely heavy increases in supplies this year, it is improbable that a purchase program would raise August-December average prices above the predicted 20-21¢ level.

The Poultry Survey Committee meets four times a year to forecast prices and production and consumption trends for poultry products. Its 18th quarterly forecast, the second this year, is the result of an intensive two-day deliberation by four leading college economists: Dr. Ralph L. Baker, Pennsylvania State University; Dr. William R. Henry, North Carolina State College; Dr. Richard L. Kohls, Purdue University, and Dr. Henry Larzelere, Michigan State University. Several additional economists from industry and the U.S. Department of Agriculture serve in an ex-officio capacity.

The committee's work is co-sponsored by the American Feed Manufacturers Assn., the National Turkey Federation and the Poultry & Egg National Board.

The group's next meeting has been scheduled for Sept. 11-12.

FESTIVAL

(Continued from page 4)

year's winner and new president of the federation. Other officers and board members for the 1961-62 year are Gene George of Springdale, vice president for the northwest region; Paul Henry of Melbourne, vice president for the north central region; Paul Paladino of Russellville, vice president for the Arkansas Valley region, and Ted Cameron of Little Rock, vice president for the central region of the state.

Ed Harms of Russellville was elected secretary-treasurer for the federation.

The executive board includes presidents of affiliated organizations. They are Gene Bowen of Fayetteville, Arkansas Turkey Federation; Buster Cobb of Little Rock, Arkansas Feed Manufacturers Assn.; Carl Smith of Clarksville, Arkansas Poultry Processors Assn.; Roy Armstrong of Fayetteville, Arkansas Poultry Improvement Assn., and Rollie Hendrickson of Hot Springs, Arkansas Egg Council.

RIVER

(Continued from page 1)

grain to feed mills in a large part of Alabama, Tennessee and Georgia.

Officials of TVA, operators of the waterway system, and grain shippers met June 13 to consider a plan that would enable the movement of grain on the river again, at least on a temporary basis. TVA officials were considering the installation of a suction or blower system to transfer grain off barges, over the dam and then onto another barge.

The collapse of the wall in the lock system prevented barges from passing through, tying up thousands of bushels of grain, mostly corn enroute to ports of Guntersville and Chattanooga.

When the grain was unable to move it caused a sudden rise in the price of corn and a lot of excitement in selling offices. However, this week it was understood the situation had quieted down quite a bit, although the price of corn was up around 10¢ bu.

Brokers and feed mills said serious grain supply trouble would come in about two weeks unless a method of operating around the damaged lock is found. It was pointed out that most mills have a two- to three-week supply on hand and these stocks are now being used.

Brokers also speculated that there would probably be a rise in the costs of other ingredients within the next 10 days or 2 weeks as corn supplies on hand become depleted.

Temporary Dock Considered

It was reported also the TVA is considering establishing a temporary unloading dock at or near Wilson Dam west of the Wheeler Dam. This would mean unloading either at Florence or Sheffield and trucking grain from there instead of at Guntersville. Grain bound up the river from western and central markets for Chattanooga would still have to be hauled overland considerable distances or be reloaded onto barges above Wheeler Dam.

The Tennessee River has played an increasingly important role in the distribution of grain. It is estimated that 70 million bushels passed through Wheeler Dam last year, enroute to Guntersville and Chattanooga. The river has been credited with affording low freight rates, and feed mills operating up and down the river in north Alabama as well as eastern Tennessee have benefited.

Much of the grain used in Georgia has been trucked from Guntersville and Chattanooga, ports on the river.

Millmen say that unless a temporary method is found by the TVA soon, they will have to turn to rail and truck. This would increase the cost of grains and put further hardships on the already-depressed poultry business in the Southeast, they say.

TVA officials estimated it will take from 6 to 18 months to repair the locks.

To take advantage of the water movement of grains in serving the poultry industry, feed mills have been built at such points as Decatur, Guntersville, Albertville and Chattanooga.

At Decatur are the facilities of Alabama Flour Mills and Tennessee Valley Co-op. Guntersville has plants of Allied Mills, Ralston Purina, Cotton Producers, Consolidated Blenders, Cargill, Inc., Central Grain and O. J. Walls. At Chattanooga are mills of The Quaker Oats Co. and Central Soya. Dixie Home Feeds has a mill at Albertville.

TOP OF THE HOPPER

(Continued from page 2)

"Beef briskit, always considered one of the toughest cuts of meat, soon may be the Cadillac of beef roasts." She reports that the tenderized meat is being sent to Upper Midwest markets at a rate of 600 to 700 head a week. Also, she tried a potroast on her charcoal grill and reports that it turned out as "tender as if it had been marinated for two days or been a rolled rib roast of the best grade."

THERE ARE SOME PEOPLE who think that current and prospective low prices for poultry products will be one of the factors in bringing still more integration and contracting. They reason that more producers, observing heavy production and low returns or losses, will be interested in contract programs and guaranteed incomes, even though not large.

Last year, in some sections, turkey growers took a look at the favorable returns and figured that there would be over-production this year. They lined up this season with contract programs where they would be paid or guaranteed a certain amount, say 40¢ per bird, for their labor and facilities for the production of market turkeys.

More conventional financing has prevailed for the most part in the Midwest but, in the opinion of one veteran feed man, more contracting may be expected in this area, too, similar to that in broiler and in turkey operations in some other areas. It is noted that some "experimental" programs have been and are being tried, and it is thought that more feed companies will get into more contract production, with producers getting a certain guarantee per bird for their labor and facilities plus a share of any profits.

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

ALFALFA MEAL

Ft. Worth: Demand good for dehydrated, slow for suncured; trend lower; supply sufficient; sacked: dehydrated, 17%, 100,000 A $46@47, truck or rail, down $2@3; suncured, 13% ¼-in. grind, No. 1 $42, truck, down $2.

Kansas City: Demand fair; trend steady; supply adequate; 17% dehydrated alfalfa, 100,000 A pellets $38@40, reground pellets $39@41, down $3; 18% dehydrated alfalfa, 125,000 A pellets $40@43, reground pellets $41@44, down $3@4; 20% dehydrated alfalfa, 150,000 A pellets $47@48, reground pellets $48@51, unchanged.

Memphis: Demand fair; trend steady; supply adequate; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $42, unchanged; reground pellets $45.60, unchanged.

Los Angeles: Demand for dehydrated steady, suncured moderate; trend steady; supply for dehydrated limited, suncured ample; dehydrated meal, 17% protein, 100,000 A $51@52; dehydrated pellet meal, 17% protein, 100,000 A $53@55; suncured meal, 15% protein $43@44; suncured crumbles, 15% protein $45@46; all unchanged.

Boston: Demand slow; trend steady; supply ample; dehydrated, 17% $53.50; suncured, 15% $45; both unchanged.

St. Louis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A, pellets $41, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A pellets $47@48, down $4.50@5.50.

Denver: Demand fair; trend steady; supply ample; dehydrated $42.

Seattle: Demand fair; trend easy; supply ample; suncured, 15% protein $38, Seattle, unchanged (new crop); dehydrated, 150,000 A units $67, Seattle, unchanged (new crop).

Minneapolis: Demand good; supplies plentiful; 17% dehydrated, 100,000 units vitamin A reground pellets off $3 to $44; oiled reground off $2 to $47.

Portland: Demand fair; trend steady; supply adequate; $41 for 15% suncured; $71 for 20% dehydrated pellet meal.

Buffalo: Demand fair to poor; trend steady; supply adequate; $61.10, sacked, Boston, unchanged.

Chicago: Demand quiet; trend down $2; supply freer; dehydrated, 17% protein, 100,000 units vitamin A $42.

ANIMAL FAT (STABILIZED)

Los Angeles: Demand good; trend easier; supply ample; 6¾¢ lb., down ¼¢.

Ft. Worth: Demand fair; trend lower; supply moderate; prime tallow, tank cars 7¢ lb., drums 8½¢ lb., f.o.b. north Texas packing plants with returnable drums, down ½¢.

Memphis: Buying as needed; trend weaker; supply ample; prime tallow 6⅝¢ lb., down ⅜¢.

Boston: Demand slow; trend weak; supply plentiful; tallow 6½¢ lb., off 1¼¢; yellow grease 6¼¢ lb., off 1¼¢.

St. Louis: Demand fair; trend weak; supply ample; yellow grease 6¼¢ lb., delivered tank cars or trucks, down 1¢.

St. Paul: Demand good; supplies ample; price declined ¾¢ during the week at a level of 6½¢ lb., f.o.b. producer's plant.

Atlanta: Demand fair; trend weak; supply good; 7⅛¢ lb., f.o.b. Georgia and Alabama processing plants.

San Francisco: Demand fair; supply ample; trend down; bleachable fancy 6⅛¢ lb., down ⅝¢; yellow grease 5⅜¢ lb., down ⅝¢.

Chicago: Demand quiet; trend much easier, off 75¢@$1 cwt.; bleachable fancy tallow $6.25; yellow grease $5.62½ cwt., tank, truck or car lots.

BARLEY FEED

Los Angeles: Demand fair; trend steady; supply ample; $2.45 cwt., unchanged.

Boston: Demand slow; trend steady; supply adequate; $45, off 50¢.

Denver: Demand fair; supply short; $2.45 sacked, $2 bulk, unchanged.

Seattle: Demand fair; trend firm; supply limited; $47, truck lots, unchanged.

San Francisco: Demand fair; supply ample; trend steady; rolled $61, ground $60, both unchanged.

Baltimore: Demand quiet; trend firm; supply ample; $44.50, sacked.

Chicago: Demand slow; trend steady; supply fair; $34, sacked.

BLOOD MEAL

Los Angeles: Demand fair; trend steady; supply tight; $3.50 a unit of ammonia, sacked, unchanged.

San Francisco: Demand and supply fair; trend steady; $6.50 a unit of ammonia, sacked.

Chicago: Demand and supply fair; trend firm; 80% protein $132.50, sacked.

BONE MEAL (STEAMED)

Los Angeles: Demand fair; trend steady; supply ample; imported $80.75, 20 ton lots, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; domestic $100, sacked, f.o.b. Ft. Worth, unchanged.

Boston: Demand and supply steady; trend steady; $105, unchanged.

Cincinnati: Demand fair; trend easy; supply good; $90, sacked, Cincinnati, down $5.

Denver: Demand light; trend weaker; supply ample; $103, Denver.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

Buffalo: Demand good; trend steady; supply fair; $105, f.o.b. Buffalo, unchanged.

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

San Francisco: Demand good; supply ample; trend steady; $75.
Chicago: Demand fair; trend steady; supply adequate; $100, sacked.

BREWERS DRIED GRAINS

Boston: Demand good; trend steady to firm; supply spotty; $45@46, unchanged to $1 higher.
St. Louis: Demand fair; trend firm; supply ample; 26% protein $37, up $1.
Los Angeles: Demand good; trend steady; supply adequate; $50, unchanged.
Cincinnati: Demand and supply fair; trend higher; $42, up $3.
Ft. Worth: Demand fair; trend steady; supply sufficient; 26% protein $50.50, sacked, unchanged.
Buffalo: Demand and supply fair; trend steady; $46, Boston, off 50¢.
San Francisco: Demand fair; supply ample; trend steady; $51, sacked, unchanged.
Chicago: Demand poor; trend easier, down $1; supply ample; 26% protein $35@36.

BREWERS DRIED YEAST

Ft. Worth: Demand slow; trend steady; supply sufficient; 11½¢ lb., ton lots, sacked, unchanged.
Boston: Demand and supply steady; trend steady; 11¢ lb., unchanged.
Los Angeles: Demand good; trend steady; supply limited; 10¢ lb., 5 ton lots; 11¢ lb., 1 ton lots; 12¢ lb., less than ton lots; both sacked and unchanged.
Cincinnati: 9@10¢ lb., sacked, unchanged.
Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.
St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.
Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.
Milwaukee: Demand fair; trend steady; supply ample; 10½@12½¢ lb., ton lots, sacked.
Buffalo: Demand good; trend higher; supply fair; $8.75 cwt., Boston, up 10¢.
San Francisco: Demand fair; supply good; trend steady; 10¢ lb., sacked, unchanged.

CALCIUM CARBONATE

Ft. Worth: Demand normal; supply sufficient; trend steady; $4.50@5, f.o.b. north Texas, unchanged.
Los Angeles: Demand fair; trend steady; supply adequate; flour $9.85, 20 ton cars; meal $10.20, 20 ton cars; both sacked and unchanged.
Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.
Denver: Demand and trend steady; supply ample; $12.50, carloads.
Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.
Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.
Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

COCONUT OIL MEAL

Los Angeles: Demand and trend steady; supply adequate; copra cake $65, unchanged.
Seattle: Demand fair; trend firm; supply tight; $70, f.o.b. car Seattle, sacked, solvent type, unchanged.
Portland: Demand slow; trend lower; supply adequate; 20% solvent $63.20.
San Francisco: Demand fair; supply ample; trend steady; solvent $52, unchanged.

CONDENSED FISH SOLUBLES

Ft. Worth: Demand fair; supply unobtainable for nearby position; tank car, West Coast production, nominal $4.41 cwt.; dried fish solubles, nominal $151.60, unchanged.
Los Angeles: Demand good; trend steady; supply limited; 3¼@3½¢ lb., unchanged.
Boston: Demand slow; trend steady; supply adequate; $37.50@40, unchanged.
Denver: Demand good; trend steady; supply ample; 3½¢ lb., West Coast, unchanged.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $41.70, meal $78.70.
Atlanta: Feed $45.10, meal $82.10.
Birmingham: Feed $42.90, meal $79.90.
Boston: Feed $46.60, meal $83.60.
Chicago: Feed $35, meal $72.
Cleveland: Feed $43, meal $80.
Denver: Feed $45.30, meal $82.30.
Ft. Worth: Feed $43.80, meal $80.80.
Indianapolis: Feed $40.25, meal $77.25.
Kansas City: Feed $35, meal $72.
Louisville: Feed $41.55, meal $78.55.
New York: Feed $46.20, meal $83.20.
New Orleans: Feed $45, meal $82.
Norfolk: Feed $45.60, meal $82.60.
Philadelphia: Feed $45.80, meal $82.80.
St. Louis: Feed $35, meal $72.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $42, down $4.
Seattle: Demand good; trend steady; supply ample; $53.50 car, down $1.

COTTONSEED OIL MEAL

Ft. Worth: Demand improved; supply adequate; trend steady; 41% old process $56@57, f.o.b. mills Ft. Worth, up $1@2; pellets $2 additional; hulls $15@16, up $1.
Memphis: Demand poor; trend steady; supply light but sufficient; prime 41% protein old process $59, up $1; new process 41% protein $60, down $2.
Kansas City: Demand slow; trend steady; supply ample; 41% solvent process $62.80, unchanged; 41% old process $61.50@62, unchanged.
Los Angeles: Demand and trend steady; supply ample; $60, unchanged.
St. Louis: Demand slow; trend firm; supply adequate; 41% solvent process $60.50, Memphis, up $1.50.
Cincinnati: Demand and supply fair; trend steady to higher; $67.60, up $1.60.
Denver: Demand fair; trend steady; supply ample; $61.50.
Atlanta: Demand good; trend stronger; supply limited; 41% $65 Georgia, $63 Alabama, $61 Mississippi producing mills.
Seattle: Demand fair; trend steady; supply limited; 41% expeller $71, f.o.b. car Seattle, unchanged.
Portland: Demand fair; trend mixed; supply adequate; 41% solvent $70.20@74.20.
Buffalo: Demand and supply fair; trend higher; $81.25, sacked, Boston, up $2.50.
San Francisco: Demand fair; supply ample; trend firm; 41% $67.20, 44% $71.20, both unchanged.
Chicago: Demand fair; trend strong to 50¢ up; supply moderate; Memphis basis, hydraulic $61.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50 sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $59, f.o.b. Coronet, Fla.
Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.
Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.
Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, maximum fluorine .18% $51 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.
Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).
Portland: Minimum 18% phosphorus, minimum calcium 31.5%, maximum calcium 33%, maximum fluorine 0.1% $91, f.o.b. Portland, in 100 lb. multiwall bags; $3 ton less in bulk; carloads or truck loads, bulk or bagged.
Ft. Worth: Demand fair; trend steady; supply sufficient; minimum 18¼% phosphorus, maximum 31% calcium, maximum .18% fluorine $76.65, sacked, unchanged.
Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50, f.o.b. Cincinnati, unchanged.

DICALCIUM PHOSPHATE

Trenton, Mich.: 18½% P $83, bulk, boxcar/hopper car; $86, bagged, in less than carload lots; 21% P, $94.05, bulk, boxcar/hopper car; $97.65, bagged, in carloads or truck loads; $107.65, bagged, less than carload; all prices f.o.b. Trenton, freight equalized with nearest producing point.
Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.
Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons $10 more.
Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.
Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50, sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.
Buffalo: Demand fair to good; trend steady; supply adequate; $82.93, f.o.b. Buffalo, unchanged.
Denver: Demand good; trend steady; supply ample; $88.50, unchanged.
Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.
Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.
Los Angeles: Demand slow; trend unchanged; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.
Cincinnati: 18½% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points, unchanged.

DISTILLERS DRIED GRAINS

Louisville: Demand fair; trend steady; supply gradually lower; bourbon grains, dark $53, sacked and packed, f.o.b. Louisville, light $1@3 less; solubles unchanged at $73, bulk prices about $5 less, based on sacking cost; many distilleries are closed down and most will be down in July and August; not much production is expected before mid-September.
Boston: Demand good; trend firm; supply tight; dark $68, nominal, unchanged.
Cincinnati: Demand fair; trend steady; supply adequate; $55, unchanged.
Buffalo: Demand fair to good; supply poor; too scarce to quote.
Seattle: Demand good; trend firm; none available; $71, delivered truck lots, sacked, unchanged.
San Francisco: Demand fair; supply ample; trend steady; solubles $79, sacked, unchanged.

DRIED BEET PULP

Los Angeles: Demand and trend steady; supply moderate; $44.90@45.20, unchanged.
Boston: Demand fair; trend steady; supply adequate; plain $67, sacked, up $2.
San Francisco: Demand good; supply fair; trend steady; $45.50, unchanged.
Portland: Demand dull; trend steady; supply ample; $47.58, sacked.
Denver: Demand light; trend steady; supply scarce; $60, unchanged.
Atlanta: Demand fair; trend steady; supply light; $63.50, sacked, delivered.
Seattle: Demand good; trend steady; supply ample; $49, delivered carlots, sacked, unchanged.
Buffalo: Demand fair; supply poor; too scarce to quote.

DRIED BUTTERMILK

Los Angeles: Demand fair; trend steady; supply ample; 13¾@14¢ lb., sacked, unchanged.
Boston: Demand and supply fair; trend steady; 14¢ lb., unchanged.
Buffalo: Demand only fair; trend steady; supply adequate; $10.60 cwt., Boston, unchanged.
Chicago: Demand slow; trend steady; supply ample; medium acid $9.75@10.50 cwt., sacked; sweet cream $9.75@10.50 cwt., sacked.
San Francisco: Demand fair; supply ample; trend steady; 13½¢ lb., sacked, unchanged.

DRIED CITRUS PULP

Los Angeles: Demand and trend steady; supply limited; orange pulp $43, lemon pulp $41, both unchanged.
Boston: Demand good; trend firm; supply adequate; $53.65, sacked, up 95¢.
San Francisco: Demand and supply fair; trend steady; meal $48, sacked, unchanged.
Atlanta: Demand fair; trend steady; supply good; pulp $37.50, meal $32.50, both sacked, f.o.b. Florida processing plants.
Buffalo: Demand poor; trend steady; supply adequate; $35, sacked, f.o.b. Florida points, unchanged.

DRIED SKIM MILK

Ft. Worth: Demand fair; trend steady; supply limited; $15.65 cwt., sacked, unchanged.
Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots; 13¾¢ lb., ton lots; both sacked and unchanged.
Boston: Demand active; trend firm; supply tight; 13½¢ lb., nominal, unchanged.
Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.
Minneapolis: Price continues firm at $12.
San Francisco: Demand and supply fair; trend steady; 14½¢ lb., sacked, unchanged.
Buffalo: Demand good; trend steady; supply only fair; spray $11.45 cwt., Boston, unchanged.
Chicago: Demand and supply fair; trend steady; $11.50 cwt., sacked.

DRIED WHEY

Kansas City: Demand good; trend steady; supply ample; $5 cwt., sacked, unchanged.
Ft. Worth: Demand fair; trend steady; supply adequate; standard $4.75, sacked, truck or rail, delivered Ft. Worth, down 25¢; small lots $5.25, f.o.b. warehouse Ft. Worth, unchanged.
Los Angeles: Demand fair; trend steady; supply adequate; $5.18 cwt., carloads; $5.35 cwt., l.c.l.; both sacked and unchanged.
Boston: Demand active; trend firm; supply good; 5¼¢ lb., unchanged.
Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.
Denver: Demand and trend steady; supply ample; $6.20 cwt., unchanged.
Minneapolis: Demand steady; supplies still limited; $4.75, f.o.b. shipping points.
Seattle: Demand steady; trend easy; supply good; $5.85 cwt., ex-warehouse, l.c.l., unchanged.
San Francisco: Demand and trend steady; supply good; $5.25 cwt., sacked, unchanged.
Chicago: Demand quiet; trend firm; supply adequate; $4.75@5 cwt., sacked.

FEATHER MEAL (HYDROLYZED)

Ft. Worth: Demand good; trend lower; supply scarce; 85% protein, nominal $85@89, down $2.50@3.50.
Los Angeles: Supply nominal; $1 a unit of protein, sacked, unchanged.
Boston: Demand steady; trend firm; supply tight; $90, sacked, nominal, unchanged.
Atlanta: Demand good; trend steady; supply short; $84, f.o.b. Georgia and Alabama processing plants.
San Francisco: Demand and supply fair; trend firm; $95, sacked, unchanged.

(Turn to QUOTES, page 102)

Major Markets Roundup

Market Decline Led by Protein Ingredients

Ingredient markets throughout the country were on the slow order this week with prices moving to lower ground. Leading the losers once again were the high protein ingredients.

Animal fat took a plunge of as much as 1¼¢ in some markets. USDA figures show a $2.90 loss for soybean meal. Losers also included meat and bone meal and tankage, down $2.20 and $3.50, according to the figures released by the U.S. Department of Agriculture for the week ending June 13 (see table).

The threat of a major ocean shipping tie-up had little effect on ingredient trading.

The overall loss of the ingredients was 1.1, according to USDA.

Distillers' dried grains posted a $2.00 gain in the USDA index which appears on this page.

East

BOSTON: Millfeeds were again irregular in the local market. The majority of feedstuffs held around the closings of the preceding week, reflecting a spotty buying interest.

There were a few wide movers; soybean oil meal was on the downside along with animal fats, the latter quickly revealing the lack of export demand. Bran and middlings led on the upside although at the closing levels much of the snap was out of the market.

Good pasture conditions contributed to the overall casual buying interest, a trend which spread to poultry rations which are reflecting cutbacks because of flock liquidation and the current record low broiler quotations.

BUFFALO: The ingredient market headed downward, with few exceptions. Grains were weak, with corn off 3½¢, oats off 1¾¢, barley down 2¢ and feed wheat unchanged, but biddable.

Animal tallow suffered the sharpest decline in 15 to 20 years with a drop of ½ to ¾¢ to 6½¢ a pound. The slump presumably resulted from a dearth of exports. Soybean oil meal dropped $3. One spokesman said he had heard of an instance where 50% soybean oil meal was offered at the price of 44%. The spokesman was skeptical but he did say it was indicative of a "sick market." Cottonseed oil meal moved up $2.50 on the closing of some processors. Linseed oil meal backed down $1 in the face of the rise in cottonseed oil meal.

Fish meal gave up $5 on the availability of limited supplies of new crop Menhaden. Hominy bucked the general downturn with a $1 rise on a slowdown in production. Trading was quiet in millfeeds. Bran was off $1; middlings were down $2 and red dog held steady. Sacked bran and middlings were just as difficult to sell as bulk items and the differential narrowed down from $6.50 to $6.

Midwest

CHICAGO: While soybeans themselves were having a wide-open break that carried the July down to under $2.60 bu. and the lowest price for that future in four months, soybean meal futures on the Chicago Board of Trade were giving a fairly good account of themselves.

Meal for July delivery was off only about 25¢ per ton for the week. But, some more deferred lost a little more ground than the nearby old crop position.

Volume of meal futures trade was liberal with a total of 8,693 lots of 100 tons each traded in during the previous five sessions. This aggregates 869,300 tons. The sell-off in the raw commodity brought a fair amount of liquidation of the open interest in July meal with a cut from 3,076 tons down to 2,358 tons.

Cash handlers of meal report enough of a demand to have held the market quite firm in the face of what has taken place in beans themselves. June 16: 44% meal, unrestricted billing, was quoted at $63.50-64 and 50% at $70.50-71, both Decatur basis.

CINCINNATI: The local market for formula feed ingredients presented quite an unusual situation this week.

While demands for feeds were substantially better than they had been in recent weeks, prices for a wide variety of ingredients were experiencing declines that ranged up to $5 for steamed bone meal, after a like price decline a week earlier.

Manufacturers said this has resulted from the sharp competition for the increased volume of business, and that a leveling of prices can be expected during coming weeks.

Other price declines included: Corn oil meal, $4; meat and bone scraps, $2.50; unground grain screenings, $2; tankage, $3; alfalfa meal, $4.50 to $5.50; hominy feed, 50¢; linseed oil meal, $2.50; millfeed, $1 to $2; screenings, $2, and soybean oil meal, $2 to $2.50.

The only ingredient price advances were noted for brewers dried grains, $3, and cottonseed oil meal, $1.60.

MINNEAPOLIS-ST. PAUL: The feature of the slow local ingredient market this week was a drop of ¾¢ lb. in the price of animal fat. Last week animal fat dropped ½¢ lb. for a 1¼¢ drop in two weeks.

The price of 44% soybean meal held steady on the local market this week at a price of $63. However, the 50% protein meal dropped $1.50 to $68.50.

Tankage prices were off from $95 to $97 to a level of $91 to $95. And, the price of linseed oil meal was off $2.50 under slow demand.

Millfeed prices were steady to off 50¢. Middlings were off 50¢ to $37.50 and bran was off the same amount to $36.

Alfalfa meal prices dropped $2 under the pressure of new crop supplies. Reground pellets were $44 and oiled reground $47.

ST. LOUIS: Although price changes have been mostly small and irregular this week, a weak undertone persists in many feed ingredients. Trading has been fairly active. The government continues to sell corn rather freely, according to reports here, and this puts pressure on the cash structure of all ingredients.

Weakness held on in soybean meal with a further price reduction of $3.50 a ton. Burdensome stocks of meal in processor hands along with unfavorable feeding ratios for broilers were depressing factors. News of soy plant shutdowns for clean-up and repair failed to reverse the trend.

Animal fats were under pressure and the price of yellow grease was off $20 a ton. Principal developments were the lack of new export orders, and fall off in demand from soap manufacturers due to plant closings for vacations.

Dehydrated alfalfa meal maintained steadiness in a moderate turnover. Buyers were taking supplies only as needed, expecting lower prices.

South

ATLANTA: Most of the cottonseed oil mills have completed their crushing operations and cottonseed hulls and meal are fast becoming short in supply.

Fairly good buying interest in oil meals has caused producers to advance as much as $3 per ton.

Only two or three citrus processors are still in operation with prices remaining firm and very little pulp is moving at the $37.50 level as most dealers have heavy inventories bought at the cheaper level which will be used before restocking.

MEMPHIS: Prices of ingredients moved in irregular fashion on the Memphis market this week, with demand ranging from good to poor.

Alfalfa meal prices remained unchanged though demand was fair in the face of increased offerings from nearby producers that pressed on the market.

Buyers now seem to have ample stocks and are very selective in purchases of animal and poultry protein. Supplies of animal fats were plentiful and prices drifted downward. Millfeed was up $1 to $2.

Developments in cash soybean oil meal and cottonseed oil meal proved factors in how the futures boards moved on the Memphis Board of Trade.

Featuring soybean oil meal was an extreme break in that product as well as soybeans, with cash and futures prices down considerably. Still, there was no noticeable hint of demand improvement. Extremely low broiler prices continued to be a bearish factor in the market.

The local supply of cottonseed oil meal was light due to shutdown of mills. Sufficient stocks of sacked cottonseed oil meal were available to satisfy the demand. The market was fairly dull with limited buying or selling interest.

Unrestricted soybean oil meal closed June 13 unchanged to $1.60 per ton lower than June 6 on the Memphis Board of Trade, with bulk solvent cottonseed oil meal 50¢ lower to $1.50 higher.

Trading volume for the week amounted to 7,000 tons of unrestricted soybean oil meal.

LOUISVILLE: Most of the independent, smaller distillers have closed down until fall and production of distillers dried grain is gradually becoming smaller and smaller. Even one of the largest producers will be down over July and perhaps a bit longer.

No price change is anticipated here before late July or early August.

Southwest

KANSAS CITY: Ingredient prices this past week have shown very little change in most items but there were a few that posted some losses.

Millfeeds were down $2 to $3 on bran and middlings while shorts were only off $1. Sacked shorts remained in good demand with nearby supplies scarce. Flour grind in this area will be somewhat improved for next week which contributed to the lower prices.

Protein prices were mostly unchanged to lower with tankage off $2.50 to $5. Soybean meal was under pressure the early part of the week but the distressed spot prices finally ran into some demand that cleaned up the distress cars and pushed prices up from the lowest.

Meatscraps and fish meal were about unchanged for the week with nearby demand good.

FT. WORTH: A number of feed ingredients declined during the week with soybean meal leading the way with a $4.50 lower price on 44% and as much as a $7 decline on 50%. Meat and bone meal, poultry by-products, feather meal, alfalfa meal and linseed oil meal were all $2 to $3 lower. Vegetable and animal fat was down ⅝¢ lb. and molasses ¼¢ gal.

There was some improvement in demand for cottonseed oil meal and prices were $1 to $2 higher. Rice mills were closing down for the season and rice bran advanced $1. Millfeed was stronger, with quotations $1.50 to $2.50 higher than previous week.

West

SEATTLE: Grain markets fluctuated in a narrow range this week.

Feeds: Average Bulk Prices and Index of Weighted Prices*
(Dollars per ton)

	June 13, 1961	June 6, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	73.80	76.70	—2.90
Cottonseed meal	62.80	62.35	+ .45
Linseed meal	60.35	61.70	—1.35
Copra cake or meal	58.50	58.50	...
Peanut meal	63.00	63.00	...
Index	90.8	93.2	—2.4
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	91.95	94.15	—2.20
Tankage	90.00	93.50	—3.50
Fish meal	113.65	112.50	+1.15
Index	83.2	84.6	—1.4
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed and meal	48.15	49.75	—1.60
Dist. dried grains	57.70	55.70	+2.00
Brewers dried grains	40.65	40.65	...
Index	76.4	77.5	—1.1
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	37.05	36.60	+ .45
Midds. and shorts	40.85	39.10	+1.75
Index	70.4	68.4	+2.0
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	41.60	41.10	+ .50
Rice bran	30.00	29.50	+ .50
Index	63.9	63.1	+ .8
ALFALFA MEAL			
Prices at prin. mkts.	46.35	46.85	— .50
Index	89.2	90.2	—1.0
MOLASSES, FEEDING			
Prices at prin. mkts.	28.44	28.44	...
Index	84.6	84.6	...
ALL FEEDSTUFFS			
Index	83.2	84.3	—1.1
FEED GRAINS			
Prices at prin. mkts.:			
Corn	39.20	40.10	— .90
Oats	43.40	44.20	— .80
Barley	39.90	39.80	+ .10
Grain sorghums	42.30	41.90	+ .40
Index	63.7	64.9	—1.2

*Base period of index is 1947-49.
Source: USDA.

Milo strengthened about $1 to $51.50. Corn, on the other hand, slid off 50¢ to $53.50.

Concentrate markets were on the weak side. Soybean oil meal was off about $3 to $88.20. Forty-one per cent expeller cottonseed meal was unchanged at $71.50, however it appeared that the resellers were getting a little edgy. Forty-four per cent solvent meal was off about $4 to $77. Linseed meal was off the market with the last quotations at $85 sacked.

Copra meal was in tight supply and quoted at $70 sacked.

PORTLAND: Prices for major ingredients worked lower during the week's spotty and generally limited trading. Demand from mixers appeared mostly on a hand-to-mouth basis. Offerings of principal ingredients appeared seasonally more plentiful.

Linseed meal values slipped as much as $3.50 a ton while soybean oil meal quotes closed $1.50 to $2.50 a ton down. Cottonseed meal listings were very erratic during the trading period and finished $1 lower to $3 higher.

Meat and bone meal prices declined as much as $5 a ton while fish meal declined about 10¢ a protein unit. Wheat millfeeds closed 50¢ a ton lower during dull trading and narrow demand.

Milo was the only feed grain that held unchanged. Corn price tags were as much as 75¢ to $1 down and bar-

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ley values finished 75¢ to $1 lower with oats ending as much as $1.50 lower.

LOS ANGELES: Probably the most significant feature of the ingredient market this week was a 10¢ cwt. advance in milo prices and 7¢ cwt. increase in corn prices, causing dealers to raise all feed prices once again. Higher grain prices are predicted throughout July.

Soybean meal and meat scraps both declined about 5¢ per unit of protein to give some relief to this market.

Other Reports

ALFALFA MEAL: Total production of dehydrated alfalfa Jan. 1-May 31 of this year appears to have been more than 30% under output in the same months of 1960, according to the results of a survey reported by the American Dehydrators Assn. June 9. The survey showed also that May 31, 1961, stocks were down 20% or more from May 31, 1960.

Production up to May 31, ADA said, was down 31.76%—from 105,301 tons to 71,857. For Nebraska alone the decline from a year earlier was more than 50%, down from 44,913 to 21,914 tons.

Surveyed inventories of dehydrated alfalfa amounted to 65,995 tons on May 31 of this year, down 21.45% from the 84,019 tons reported a year earlier.

ADA noted that survey returns from west of the Rocky Mountains were too few to give any significant figures, so that region was left out of calculations.

ANOTHER SURVEY, initiated in March by ADA, indicated that responding dehy producers—73 returns representing a total tonnage of 916,146—exported 1.54% of their production, sold 12.5% to local feeders and shipped 85.92% to formula feed manufacturers.

The 916,146 tons of dehy involved in the survey represents 85.97% of total 1960-61 crop year tonnage reported from the area involved, ADA said. Survey figures are from east of the Rocky Mountains.

Of the tonnage represented, 14,136 tons were exported; 114,876 tons were sold locally to feeders and 787,134 tons went to formula feed manufacturers.

UREA FEED COMPOUND: A $3 ton price increase in feed grade urea to become effective July 1 has been announced by the Nitrogen Products Division of W. R. Grace & Co.

All urea produced by Grace at Woodstock, Tenn., will be priced on a delivered basis after July 1 to customers in all states east of and including New Mexico, Colorado, Wyoming and Montana. This new pricing policy "is an effort to avoid confusion and improve marketing services to customers," said William J. Haude, president of the Nitrogen Products Division.

He noted that industry prices on urea had been depressed for some time and his firm felt obligated to raise its prices now to insure a fair return on business.

Effective July 1, 42% feed grade urea will be delivered from Woodstock for $103 ton in bags and for $99 ton in bulk.

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QUOTES

(Continued from page 100)

FISH MEAL

Boston: Demand good; trend unchanged; supply light; 57% $112, 60% $116, both unchanged.

Ft. Worth: Demand excellent; trend steady; offerings extremely light for immediate; sacked: 65% protein Peruvian $124, June, unchanged; new crop menhaden $127.50, June, unchanged.

Los Angeles: Demand good; trend steady; supply light; local production, 60% protein $1.87½@1.90 a unit, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $108.10, unchanged.

San Francisco: Demand fair; supply ample; trend firm; $1.85 a unit of protein, unchanged.

Buffalo: Demand fair; trend lower; supply limited of new crop menhaden; 60% protein menhaden $120, f.o.b. Buffalo, off $5.

Portland: Demand slow; trend lower; supply adequate; $1.85 a protein unit, sacked.

Minneapolis: Demand good; supplies ample; prices remained steady with West Coast blended at $141, sacked, delivered, and Canadian herring at $1.70 a unit, f.o.b. West Coast, subject to production.

Atlanta: Demand good; trend steady; supply tight; 60% menhaden $115@116, sacked, Atlantic and Gulf ports.

Denver: Demand good; trend steady; supply short; $1.85 a protein unit, West Coast, unchanged.

Seattle: Demand fair; trend firm; supply limited; $1.90 a unit protein, f.o.b. truck Vancouver, B.C., sacked (Canadian production), unchanged.

Chicago: Demand slow; trend easier; supply getting heavier; menhaden, East Coast or Gulf $112@115; scrap $108@111; Canadian herring meal $1.70 a unit of protein.

HOMINY FEED

Kansas City: Demand good; trend strong; supply scarce on spot; yellow hominy $35@35.50, up $1.50.

Boston: Demand good; trend firm; supply adequate; $49, up $1.50.

Los Angeles: Demand good; trend firmer; supply adequate; hominy meal $50.50, hominy pellets $52.50, both up 50¢.

St. Louis: Demand slow; trend steady; supply ample; yellow $38, unchanged.

Cincinnati: Demand fair; supply adequate; $41@42, down 50¢.

Seattle: Demand good; trend steady; supply limited; $53, delivered carlots, sacked, unchanged.

Buffalo: Demand and supply fair; trend steady to higher; $48.50, Boston, up $1.

Chicago: Demand quiet; trend steady; supply fair; $39.

LINSEED OIL MEAL

Ft. Worth: Demand slow; trend lower; supply sufficient; 34% protein, extracted $65.40, June, down $3.

Boston: Demand and supply fair; trend steady; 32% $75.20, unchanged.

Los Angeles: Demand fair; trend steady; supply light; local production, 31% protein $71, unchanged.

Cincinnati: Demand poor; trend lower; supply adequate; new process $51, old process $56, Minneapolis, down $2.50.

Denver: Demand fair; trend steady; supply ample; $64.

Minneapolis: Demand off; supplies good; price declined $2.50 to $49.

Seattle: Demand fair; trend steady; supply nil; 34% protein (Montana) $85, delivered carloads, sacked, unchanged.

Portland: Demand dull; trend lower; supply adequate; 34% solvent $51.50, sacked.

Buffalo: Demand fair; trend lower; supply good; $48.50, f.o.b. Minneapolis, off $1.

San Francisco: Demand fair; supply ample; trend steady; $70, down $2.

Chicago: Demand slow; trend steady on solvent, $1.50 off on expeller; supply ample; Minneapolis basis: solvent $49.50, expeller $55.50.

MEAT AND BONE MEAL

Ft. Worth: Demand good; trend steady; limited offerings for immediate delivery; meat and bone $92.50 bulk, $96 sacked, f.o.b. Ft. Worth, unchanged to $2.50 down.

Kansas City: Demand fair; trend steady to easier; supply ample; 50% $95@97.50, unchanged to down $2.50.

Memphis: Demand poor; trend lower; supply more than adequate; 50% protein $94, nominal, without billing, down $3.50; 50% protein $95.50 nominal, with rail transit, down $5.50.

Boston: Demand good; trend easier; supply adequate; $1.55 a protein unit, off 5¢; converted 50% $92, off $2.50.

St. Louis: Demand fair; trend easy; supply ample; 50% $92.50, down $2.50.

Los Angeles: Demand slower; trend easier; supply moderate; 50% protein $1.80@1.85 a unit, unchanged to 5¢ lower.

Cincinnati: Demand better; trend steady; supply fair; 50% meat and bone scraps $91, Cincinnati, down $2.50.

Denver: Demand fair; trend steady; supply scarce; $86.

St. Paul: Demand fair; supplies ample; prices held at a level of $100@103.

Seattle: Demand fair; trend steady; supply limited; $1.90 a unit protein, ex-processing plant, sacked, unchanged.

Portland: Demand slow; trend lower; supply ample; 50% $87.50, sacked.

Buffalo: Demand quiet; trend steady; supply light; 50% meat scraps $90, f.o.b. Buffalo, unchanged.

San Francisco: Demand good; supply fair; trend down; $1.75 a unit of protein, unchanged.

Chicago: Demand quiet; trend easier, off $5; supply ample; 50% protein $97.50, sacked.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock, 13% phosphorus $39 sacked, bulk $2 less; 14% $43 sacked, bulk $2 less.

MILLFEED

Minneapolis: Demand slow; prices were steady to off 50¢; sacked middlings were off 50¢ to $37.50; sacked bran was off 50¢ to $36; sacked red dog price was steady at $43.

Ft. Worth: Demand fair; trend lower; offerings light for immediate; bran bulk $38.50, burlaps $42.50; gray shorts bulk $43, burlaps $47; bulk middlings $43, delivered Texas common points; bran and shorts $1.50@2 higher and middlings $2.50 higher.

Chicago: Demand and supply fair; trend steady to $1 lower; standard bran $34; standard midds. $36.50; red dog $39.50@40.50.

St. Louis: Demand good; trend steady; supply limited; sacked bran $40.25, up $1; sacked shorts $43.25, up $2; bulk bran $34.50, up $1.50; bulk middlings $37, up $2.

Cincinnati: Demand poor; trend lower; supply adequate; bran $34, middlings $41; bran down $2, middlings $1.

Buffalo: Demand and supply fair; trend steady to lower; bran $41, off $1; middlings $37.50, off $2; red dog $43.50, unchanged; all prices f.o.b. Buffalo.

Boston: Demand improved; trend unsettled; supply adequate; bran $42.10, up $2.50; middlings $48.10, up $2.50.

Memphis: Demand fair; trend weak; supply ample; wheat bran $36.80, up $1; gray shorts $40.80, up $1; standard midds. $39.80, up $2.

Denver: Demand steady; supply ample; shorts $41.75, bran $37.75, millrun $39.75.

Portland: Demand dull; trend lower; supply tight, but ample; $40@41.

Seattle: Demand fair; trend firm; supply limited; $41, delivered common transit points, carlots, up $1.

Los Angeles: Standard mill run $46, unchanged to 50¢ lower, demand moderate, trend easier, supply ample; red bran $46.50@47.50, unchanged to 50¢ higher; demand moderate, trend firm, supply light.

San Francisco: Demand good; supply fair; trend steady; millfeed $43, unchanged; red bran $48.50, unchanged.

MOLASSES

Minneapolis: Demand fair; supplies adequate; price firm at $35 for blackstrap, tank truck, delivered; $31 for beet; $33 for blend.

Seattle: Demand fair; trend firm; supply good; $26.75, f.o.b. Seattle, tank truck lots, unchanged.

Buffalo: Demand fair; trend steady; supply good; 16½¢ gal., f.o.b. Albany, unchanged.

San Francisco: Demand and supply good; trend steady; $26.75, f.o.b. cars Richmond, Cal., unchanged.

Boston: Demand and supply steady; trend firm; 16½¢ gal. in tank cars, unchanged.

Ft. Worth: Demand moderate; supply sufficient; trend steady; blackstrap 14½¢ gal., f.o.b. Houston; truck $31.49, delivered Ft. Worth, seller's market price on date of shipment, down ¼¢.

Memphis: Demand fair; trend steady; supply ample; blackstrap 14½@14¾¢ gal., tank car, f.o.b. New Orleans, up ¼¢; $31 ton, delivered Memphis, truck, up 41¢.

St. Louis: Demand slow; trend steady; supply ample; blackstrap 14½¢ gal., tank cars, New Orleans, down ¼¢.

Los Angeles: Demand good; trend steady; supply adequate; $26.50, f.o.b. tank cars; $26.75, f.o.b. tank trucks; both unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 14¾¢ gal., New Orleans, unchanged.

Denver: Demand and trend steady; supply ample; $34.70, tank car, unchanged.

Atlanta: Demand good; trend steady; supply limited; citrus $21, f.o.b. Florida processing plants.

Kansas City: Demand fair; trend steady; supply ample; 14½¢ gal., New Orleans, unchanged.

OAT PRODUCTS

Buffalo: Demand fair to poor; trend steady to lower; supply adequate; $24.25, sacked, Boston, off $1.

Chicago: Demand slow; trend steady to easier; supply fair; reground oat feed $11; No. 1 fine ground feeding oatmeal $66.50; feeding rolled oats $70.50.

Boston: Demand steady; trend unsettled; supply ample; white pulverized $55, sacked, up 90¢; reground oat feed $25, sacked, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 10% protein oat millfeed $41.30, sacked; reground $21.30, sacked, unchanged.

Kansas City: Demand fair; trend steady to weaker; supply adequate; oat mill byproduct $13.50@14, sacked, unchanged; feeding rolled oats $72@73, sacked, unchanged.

Minneapolis: Demand slow; supplies adequate; prices remain unchanged; sacked feeding rolled $79; sacked feeding oatmeal $64.50; sacked pulverized $42; sacked crimped $60; sacked oat feed $20.

Seattle: Demand and supply fair; trend steady; $56, delivered truck lots, 38 lb. or better, unchanged.

St. Louis: Demand fair; trend steady; supply ample; white pulverized $42, unchanged; reground oat feed $13, unchanged.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $44@50, unchanged.

OYSTER SHELL

Cincinnati: Demand fair; trend steady; supply adequate; 50 lb. bags $24.60, 25 lb. bags $26.85, unchanged.

PEANUT OIL MEAL

Los Angeles: Demand fair; trend easier; supply ample; $79, sacked, down $1.50.

Atlanta: Demand fair; trend steady; supply limited; 45% $62 for expeller and $61 for solvent, f.o.b. Georgia and Alabama processing plants.

POULTRY BY-PRODUCTS

Los Angeles: Demand good; trend easier; supply tight; $1.60 a unit of protein, sacked, down 5¢.

Memphis: Demand only fair; trend easier; supply adequate; 55% meal $97.50@100, nominal, sacked, down $5.

Ft. Worth: Demand good; trend steady to lower; supply scarce; $102@105, sacked, f.o.b. Texas plants, unchanged to $3 lower.

Boston: Demand steady; trend firm; supply short; $100, sacked, nominal, unchanged.

Atlanta: Demand good; trend weaker; supply limited; meat meal $97, f.o.b. Georgia and Alabama processing plants.

RICE BY-PRODUCTS

Buffalo: Demand good; trend steady; supply tight; $51.60, Boston, unchanged.

San Francisco: Demand good; trend firm; supply ample; bran $43, unchanged.

Ft. Worth: Demand fair; trend steady; supply scarce, mills closing down for season; rice bran $35@36, f.o.b. south Texas rice mills, sacked, unchanged; hulls $5, sacked, up $1.

Los Angeles: Demand good; trend steady; supply very light; California production, high fat content, bran $50, sacked, unchanged.

Atlanta: Demand good; trend steady; supply limited; bran $43, sacked, delivered.

SCREENINGS

Buffalo: Demand and supply fair; trend steady to lower; ground, sacked $28.25, New York, lake and rail, unchanged; bulk unground $22.75, New York, off 25¢.

Minneapolis: Demand and supply both fair; Canadians up 50¢ to $14; domestic lights steady at $1@5; domestic mediums steady at $10@18; domestic heavies steady at $18@26; 15% flax screenings steady at $36.

Chicago: Demand quiet; trend steady; supply fair; ground grain $31.50; Canadian $26.50, sacked.

Los Angeles: Demand slow; trend steady; supply adequate; ground barley $35, sacked, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; unground grain screenings $13@14, down $2.

SOFT PHOSPHATE

(Sacked, delivered)

Atlanta: $20.25.
Buffalo: $25.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $25.42.
Kansas City: $25.07.
Memphis: $22.23.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.32.

SOYBEAN OIL MEAL

Denver: Demand good; trend steady; supply ample; $73.

Atlanta: Demand fair; trend stronger; supply good; 44% $73, delivered.

Minneapolis: Demand good; supplies ample; price of 50% soybean meal declined $1.50 this week as the 44% held steady; 44% $63, 50% $68.50.

Ft. Worth: Demand fair; trend looks firmer since decline; supply sufficient; 44% $72 June, $73 July, down $4.50; $74 August; 50% $79 June, $80 July, $81 August, down $7.

Memphis: Demand fair; trend weak; supply ample; prime 44% solvent $64, f.o.b. Memphis, down $5.50.

Kansas City: Demand fair; trend steady to firmer; supply ample; 44% solvent process $64@64.50, up 50¢.

St. Louis: Demand fair; trend easy; supply ample; 44% $64, Decatur, down $3.50; 50% $71.50, Decatur, down $3.50.

Los Angeles: Demand slow; trend weaker; supply increased; $87.60@88.60, down $1.50@2.

Boston: Demand light; trend easier; supply ample; 44% $59, off $3; 50% $67, off $4.50, both f.o.b. Decatur.

Cincinnati: Demand poor; trend lower; supply adequate; $62.50@63, Decatur, down $2@2.50.

Buffalo: Demand fair; trend lower; supply good; $59, Decatur, off $3.

San Francisco: Demand fair; supply ample; trend down; $59, down $1.

Portland: Demand slow; trend lower; supply adequate; $95.60@96.10 for 50% test meal; $87.60@88.60 for 44%.

Chicago: Demand improved; trend irregular; supply ample; Decatur basis, 44% protein, unrestricted billing $64, E.T.L. $61; 50% protein, unrestricted $71.50, E.T.L. $68.

TANKAGE

Chicago: Demand fair; trend easier to $2.50 off; supply ample; 60% protein $97.50, sacked.

Kansas City: Demand slow; trend weak; supply ample; 60% digester $90, down $5.

Ft. Worth: Demand good; trend steady; supply scarce; 60% digester $102.50, sacked, Ft. Worth, unchanged.

St. Paul: Demand slow; supplies ample; prices off from a level of $95@97 to $91@95.

Cincinnati: Demand better; trend steady; supply fair; 60% digester $91, Cincinnati, down $3.

UREA FEED COMPOUND

Cincinnati: Minimum 42% nitrogen, 262% protein equivalent, carloads or truck loads $100, delivered, bagged; less than carloads or truck loads $113, unchanged.

Lima, Ohio: Minimum 42% nitrogen, 262% protein equivalent $95, f.o.b. bagged, unchanged.

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $95 bagged, $91 bulk, f.o.b. Woodstock, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered east of and including New Mexico, Colorado, Wyoming and Montana.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent; $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming, Montana and all states to the East.

VEGETABLE & ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; trend lower; supply limited; 6¾¢ lb., f.o.b. north central Texas, down ¾¢.

Los Angeles: Demand fair; trend easier; supply limited; 6¾¢ lb., down ½¢.

Mill Production Set

CHELSEA, MICH.—Production of feeds for General Mills, Inc., is scheduled to begin June 30 at the Michigan Feed Milling Co. here.

The firm will be operated by William and Julius Blaess of the Blaess Elevator Co. For the new feed manufacturing facility, a former custom milling operation of the Blaess Elevator Co. is being expanded, according to reports here.

It has been announced that the Blaess brothers will continue to operate their elevator east of Chelsea with its operations including buying wheat, corn and oats and selling Larro feeds. Because of the newly-formed feed mill operation's need for grain supply storage, the elevator will discontinue its government and farmer grain storage program, the announcement continued.

EASTERN

(Continued from page 1)

ing of agricultural products. The Concord consumes 7,000 dozen eggs in its kitchens each week, and operates its own dairy farm.

Nearly 400 federation members, allied tradesmen and their wives were present at the meeting. Raymond F. Weld, Middletown, N.Y., EFFM president, and his group of 1960 officers were all reelected for second terms. They include Gurdon Slosberg, first vice president; James A. Dodds, second vice president; Edward Rubinoff, third vice president; Austin W. Carpenter, executive director, secretary and treasurer, and Howard J. Benson, associate director. Two new directors were chosen: Walter K. Long, Center Valley, Pa., and Dale Anderson, York, Pa.

Points brought out in talks included:

- Character, size and location of each egg producer determine the type of marketing program which will bring profitable returns.
- A national milk sanitation act would not be favorable because it would establish a below-standard minimum floor on milk quality and would interfere with the long-standing rights and obligations of local and state health authorities.
- When feed manufacturers purchase additives they should make sure there is a guarantee with the order that the materials comply with the Food and Drug law.
- Trends toward higher-concentrate, lower-roughage dairy rations are paying off in increased milk per head; higher vitamin A levels are being used in dairy rations, particularly under hot weather conditions; extensive analysis of roughage via state and private laboratories hardly seems justified. Nutritionwise, dairying has a lot of catching up to do.

INCREASING EGG PROFITS — Profitable marketing starts on the farm with good management, Harold W. Bermender, egg and poultry marketing specialist for H. K. Webster Co., Lawrence, Mass., told the meeting. This includes (1) good chick stock, (2) careful management during production, (3) providing for uniform volume of production throughout the year and (4) keeping a good set of books.

Each individual producer has a choice of programs to suit his operation, Mr. Bermender said: (1) Selling entirely in wholesale market, (2) some wholesale, some jobbing, (3) part jobbing, part house-to-house retailing, (4) packing in cartons and some to wholesale, some to retail trade and (5) entirely retail, house-to-house.

The speaker cited a number of trends in the northeast egg business: (1) Average quality of eggs is up, (2) competition continues to be keen, (3) more eggs are sold closer to where they are produced, (4) more feeders with 5,000 hens or more who are candling and packing at the source of production.

Mr. Bermender believes a successful egg producer must provide for an unconditional guarantee on eggs to stores and consumers. He emphasized the importance of carton inserts to carry to consumers a message of egg values and the farm where they were packed.

The retailing of eggs sometimes is successful when retail routes also handle dressed chicken. Some producers have had success with egg vending machines if their farm is in a good location. A sale of 200 dozen a week will amortize the cost of an egg vendor in two years.

When independent producers sell to retail stores it is important to price their eggs over shipped-in, store eggs. While some producers have gained a good volume of business at a mark-up as much as 10¢ doz. over store eggs, a realistic mark-up is 6¢ doz., according to Mr. Bermender.

The speaker described his company's program of live fowl marketing. An important aspect of the program is the fact that the feed mill is able to place poultry dealers in touch with growers, thereby broadening the producer's market. Other producers have gone into the quality frozen pie business in order to expand their sales volume.

MILK QUOTAS: YES OR NO? — A national milk quota probably will not be instituted in the next few years, Dr. Stewart Johnson, agricultural economist, University of Connecticut, Storrs, suggested in his discussion on marketing regulations for milk. There is little support from milk marketing cooperatives in the Northeast, or the U.S., he said, and if quotas were set as federal officials might want them, they would be over present production levels.

However, these opinions might change should higher support prices result for feed grains and other farm commodities. While penalties for over-quota milk do give farmers for extra output more nearly what the extra milk is worth, there are a number of factors which are on the less desirable side of the quota picture:

(1) Inflexibilities of quotas retard natural economic progress. (2) Considering sharp advances of milk production in some states, and declines in others over the past 20 years, would a national quota deviating from the actual trends be in the public interest? (3) Employment and welfare of one third of the national working force—the number involved in producing, transporting, processing and handling farm products—would be affected by a curtailment in output.

An alternative to a national quota would be individual quotas in the various federal milk order markets, Dr. Johnson said. Quotas are not legal now, he declared, but base-excess plans with new bases established each year are permissible. Some areas are favorably inclined to market area quotas, but others including some in the East are not.

Would farmers gain from a single Northeast federal milk marketing order? Dr. Johnson thinks not because the area is varied in present systems of operation, and a single order would be large, unwieldy and take too long to make needed changes.

As to a national milk sanitation act, the speaker reflected the disfavor in the Northeast as follows: (1) It would establish a minimum floor for milk quality and would not permit city or state to enforce higher standards. (2) The act would interfere with and nullify the rights of cities and states. (3) With dairying a 365-day-a-year operation in most cases, obtaining satisfactory milk quality is not so much a police job as a continuing educational job with producers. (4) Because of the number of fieldmen required for regular inspection; less frequent inspection, more lenient interpretation and fewer fieldmen may result.

FDA, CLOSER TO HOME — Just because a feed manufacturer may sell his formula only within the boundaries of his home state is no exemption from provisions of the food and drug law, Dr. Charles G. Durbin, veterinary medical director, FDA, Washington, declared. The Pinocchio Oil case which was tried in the 2nd Circuit U. S. Court of Appeals, New York, established the fact that because components of a blend were shipped from other states, the resulting blend will be subject to federal law even though the blend is sold within the state in which it is manufactured.

"We in government believe that people want to do the right thing—it's good business," Dr. Durbin said, "therefore, if there are any questions about the law, we ask you to contact us.

"Always be sure that any additives you purchase for your mill come with a guarantee that they comply with the FDA law," he added. "Then in filing an NDA be sure to list all of the ingredients and the amounts, the type of mixing equipment (size) and length of mixing time. In the case of custom mixes which might have an open formula on grain, there should be a specific NDA filed on the new drugs and FDA should be notified if there is any change in the grain portion of the formula."

The speaker reviewed the aspects of the new announcements which came out last month and described their purpose to "clarify the law and its regulations." He summarized the requirements of safety and voiced the hope that a ruling can be received to the effect that "if there is no tissue residue in the animal, it's safe for man."

HIGHER CONCENTRATES; MORE MILK — The emphasis on high-concentrate, low-roughage rations for milking cows represents a major shift from earlier and still commonly-used feeding recommendations, Dr. H. Ernest Bechtel, director of technical service and development, Dawe's Laboratories, Inc., Chicago, told the group. The economy of production was higher, evidence of mastitis was not increased, fresh cows are brought on full feed more rapidly and the feeds are easier to store and handle when this program is used.

With better than average cows, at least 2,000 lb. more milk per cow per lactation can probably be obtained in most cases by substituting added concentrates for roughage. All-concentrate and/or all-pelleted rations, however, are not yet recommended. With present knowledge, best results are likely when a minimum of 5 to 10 lb. of unchopped hay or equivalent are consumed in the ration.

Experience thus far indicates that appetite is the first lactation-limiting factor with good cows, so that virtually free choice feeding of concentrates can be justified under practical conditions when combined with a good record system and effective culling.

Minimum roughage levels should be fed in balanced rations to maintain normal rumen function in the summer. This decreases heat stress and brings more daily milk production per cow.

The speaker discussed increased interest in vitamin A and mentioned its use to fight heat stress in dairy cows. Cited were studies providing a basis for using double levels of true vitamin A in dairy rations in hot summer months.

Old levels of around 10,000 units of A daily per cow appear low, and some feed manufacturers are now using 30,000 units daily. The increased cost for this added A is good insurance, Dr. Bechtel said, and the higher levels may help counter any excessive nitrates in feedstuffs as a result of heavy crop fertilization.

Good quality roughage is useful, but despite the value of good roughage, its extensive analysis via state and private laboratories seems hardly justified, said Dr. Bechtel. Hay is extremely variable in quality, and routine chemical analyses still fail to clearly reveal the feeding value of the sample.

"Whether analyses are or are not available," said Dr. Bechtel, "the best practical way to feed modern dairy cows with a better than average production potential is on essentially a free choice basis where the appetite becomes a prime controlling factor. Thus, on modern high energy or hot rations, the chief objective should be to feed liberally enough on a good concentrate mix so that animals will eat only the desired minimum of roughage. If the roughage turns out better or poorer than average insofar as the cow is concerned, the animal — irrespective of any chemical analyses—will still be obliged to adjust the intake of total feed to meet requirements for maintenance, production and reproduction.

"Expenditures for numerous roughage analyses may create customer or farmer goodwill but otherwise do not appear too promising in really solving any of the dairyman's feeding problems."

More drylot dairying is on the way, Dr. Bechtel continued. As the size of the individual herd expands, so will the tendency to shift by degrees into a drylot or partial drylot program. Land will be farmed more intensively, with less pasture, more green chopping, less corn picking, more ensiling, and more buying of hay and especially of grain, along with proteins and feed additives or micro-nutrients.

Dr. Bechtel also discussed other developments, including more attention to non-protein nitrogen and to thyroprotein.

He commented that in the field of micro-nutrients, some investigators have been prone to condemn or ignore—rather than to adequately research—various available factors.

Today's real need is for stepped up research at the basic level. Dairy ration formulations and feeding practices in many respects are more than 30 years behind the times.

Dr. Bechtel noted that synthesis by rumen microflora is not always optimum, and he mentioned ruminant research on such things as choline and lysine.

Perfection of control of rumen microflora synthesis may well lead to practical feeding of all-concentrate rations.

Nutrition-wise, dairying has a lot of catching up to do, Dr. Bechtel believes. This gap may be closed within the next five years, and meanwhile, basic researchers will be obliged to "run faster to stay in place," so to speak. There will be increasing instances where the "why" of field innovations will come from the basic-research laboratories long after these innovations have become established practice in successful dairy production operations.

OTHER PROGRAM HIGHLIGHTS —Two super-salesmen on the program included Elmer Wheeler, sales training consultant of Dallas, Texas, who is well known for selling the "sizzle instead of the steak"; and H. B. (Doc) Sharer, sales training specialist for U. S. Rubber Co., N.Y., who believes that salesmen sell "people not products."

Robert A. Kavesh, N. Y. U. economics professor, New York, spoke on the future of the American economy and the speaker at the luncheon June 13 was Dr. Charles C. Noble, Dean of Hendricks Chapel, Syracuse (N.Y.) University.

'NOT BROKEN FEED EFFICIENCY BARRIER'

MADISON, WIS. — Dairy science has "not broken the barrier to increased feed conversion efficiency," R. E. Hodgson, director of the animal husbandry research division of the U.S. Department of Agriculture, said here.

Mr. Hodgson told the American Dairy Science Assn. that while milk production per cow has risen 43% since 1946, "yet the feed units consumed per 100 lb. of milk produced have remained essentially unchanged."

He noted that American cows still have a much lower production rate than those in some other countries, pointing out that in the Netherlands cows produce half again as much milk per animal as do American cattle.

$40,000 DAMAGE

ATLANTIC, IOWA—Fire resulted in an estimated $40,000 damage at the Challenge Feed Co. here recently. Bert Laufer, owner, said the damage occurred when a burning wooden platform collapsed and machinery used to make pellets fell into the basement of the metal building.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
April 8	1,263	533	868	967	104	850	2,124	2,632
April 15	1,234	512	915	972	120	787	2,250	2,583
April 22	1,209	520	989	884	167	807	2,121	2,638
April 29	1,140	508	956	970	162	862	2,156	2,665
May 6	1,206	467	788	946	143	811	2,309	2,390
May 13	1,209	473	831	895	119	905	2,228	2,330
May 20	1,198	475	745	962	109	906	1,944	2,344
May 27	1,226	452	840	896	145	923	1,868	2,291
June 3	1,242	447	840	910	80	841	1,974	2,114
June 10	1,230	398	949	894	104	863	1,981	2,152

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
April 8	1,477	753	4,398	536	8,981	262	4,875	3,426
April 15	1,489	621	4,477	504	8,902	344	4,928	3,364
April 22	1,512	518	4,496	487	8,885	268	5,091	3,321
April 29	1,389	601	4,381	527	8,927	296	5,077	3,164
May 6	1,240	550	4,535	477	8,948	292	4,940	3,149
May 13	1,271	538	4,239	467	8,723	309	4,614	3,149
May 20	1,121	592	4,068	552	8,564	267	4,528	3,068
May 27	1,143	469	4,096	464	8,312	247	4,480	3,153
June 3	1,110	533	3,979	462	8,307	244	4,518	3,132
June 10	1,097	518	4,046	466	8,307	266	4,482	3,002

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	1960
April 8	5,448	616	3,280	363	248	1,422	45,426	34,708
April 15	5,604	623	3,094	407	318	1,516	45,564	34,980
April 22	5,517	584	3,207	340	376	1,502	45,439	36,235
April 29	5,677	589	3,301	441	327	1,489	45,605	36,783
May 6	5,495	574	3,151	403	333	1,448	44,515	38,119
May 13	5,321	579	3,205	384	278	1,503	43,670	39,124
May 20	5,331	626	2,999	381	299	1,479	42,558	39,498
May 27	5,274	614	3,097	387	340	1,489	42,206	39 901
June 3	5,377	602	2,949	367	250	1,435	41,713	39,525
June 10	5,205	648	2,977	386	250	1,441	41,662	39,137

CANADA

(Continued from page 1)

vention, and the feed manufacturers turned out in large numbers for the event.

E. E. Peden, Scott & Peden, Ltd., Victoria, B.C., president of the association, got the business sessions off to a good start by presenting a resume of the activities of the National Council during the past year.

More Integration

He said that a royal commission had made a study of the future of agriculture in Canada and reported that it probably would "eventually be controlled by the larger food processors," which is a tactful way of telling his audience that integration in food production will be the rule in Canada as well as in the U.S.

Mr. Peden reported that the National Council's sales and credit committee had given considerable attention to standard contracts between feed producers and feeders.

The need for a planned and continuing public relations program was discussed by J. F. Lowe, Blathford Feeds, Ltd., Toronto, Ont. Mr. Lowe reminded his audience that the association now has a membership of 400 and that the feed manufacturing industry with its total product value of more than $300 million ranked 21st in Canada—an economically significant industry. The total feed output in Canada last year was estimated at 3,567,000 tons.

Potential Market

The potential market for Canadian feed sales will depend in the future on what Canadian feed manufacturers will contribute to the economic efficiency of animal agriculture, according to Harold R. Cook, vice president, Master Feeds division, Maple Leaf Mills, Ltd. Mr. Cook was the first speaker on that section of the program given over to feed marketing in Canada.

Mr. Cook said that a gradually increasing population in Canada coupled with gradual increases in per capita consumption of meat, milk and eggs would be reflected in increased tonnage, but he said there is a good increase to be developed in a thorough job of educating plus selling to feeders who now do their own mixing.

"I believe that the commercial feed industry will continue to provide an expanding service to the poultry and livestock industries for many years," Mr. Cook said, adding that "there will be no place for the inefficient or lackadaisical operator. We cannot afford to be complacent. One thing is certain—industry competition will be intense in every phase."

Opportunities in the industry in Canada, Mr. Cook pointed out, "are great for the small firm as well as for the large one."

Need for Sales Programs

Jacques de Broin, general sales manager of the Pioneer Cafeteria Feeds division of Maple Leaf Mills, Toronto, presented an address, "The Sales Manager's Program," as a part of the session devoted to feed marketing. He said that the growth of the feed industry in Canada has emphasized the need of adopting a planned sales program. He said that the two big problems in the agricultural economy of Canada were unsound credit policies and unsound expansion of productive capacity.

Mr. de Broin said that "only a fraction of the total amount of feed consumed in Cana[illegible] manufactured in commercial mill...

He said that there was ample evidence available which should be put to use by feed salesmen in convincing farmers that it is to their financial advantage to feed a scientifically balanced feed instead of a "home made" product.

Modern Salesman

The role of the modern feed salesman was described by C. D. Fales, vice president and director of sales for Ralston Purina Co. of Canada, Ltd. He said that a really good feed salesman must be the following: Product expert, diagnostician, financier, administrator, problem solver, public relations man, trainer, businessman and creator.

He then detailed the items under each of these categories which at one time or another face the feed salesman. Salesmanship, Mr. Fales concluded, is one of the more complex jobs in modern industry.

Applied Nutrition

The general subject of applied nutrition for feed manufacturers was treated by three speakers during the morning session June 9. The speakers included Dr. L. E. Lloyd, chairman of the department of animal science, Macdonald College, Dr. J. K. Loosli, in charge of the laboratory of animal nutrition at Cornell University, Ithaca, N.Y., and Dr. J. R. Couch, professor of poultry husbandry and biochemistry and nutrition at Texas A&M College, College Station, Texas.

Dr. Lloyd's topic was vitamins and mineral levels in practical feed formulations. He brought the feed manufacturers up to date on recent nutritional research, including the biological interaction of several additives.

The practical use of protein and energy values was discussed by Dr. Loosli. He said that the biggest job of education and salesmanship for the feed salesman was in persuading the dairymen that they should spend more money to make more money through adoption of a full feeding program for their high producing cows. He said that it has been proved that heavy grain rations do not cause mastitis or breeding trouble, udder congestion, etc., but that the idea of spending more for heavy grain rations in order to increase production might be in the realm of new thinking for many dairymen and that it would require good salesmanship to convince the average dairyman of its advisability.

Additives

Coccidiostats were described by Dr. Couch as the most important single type of feed additive from an economic standpoint. He said that the poultry industry as we know it today would not be in existence if it were not for coccidiostats.

Vitamins were ranked high in economic value by the Texas poultry authority, along with antibiotics. During the course of his address he predicted that methionine will become a standard additive in rations including soybean meal.

Sales Service

Sales service programs were discussed at the final business session during the afternoon of June 9. Speakers during this session included Dr. H. G. Luther, scientific director of agriculture for Pfizer International, a division of Chas. Pfizer & Co., New York City.

Dr. Luther said that there are several factors to be considered in evaluating a sales service program, including finance, manufacturing, research and development, merchandising, promotion, etc., and that the problem becomes one of optimum allocation of the total effort.

Dr. H. Simpson, technical director, animal feed and animal health products, Cyanamid of Canada, Ltd., discussed the techniques of product field services. He said that the key to successful operation of service programs is "effective communication of information." The three areas he discussed were management, nutrition and sanitation and disease control.

He said that feed service personnel should be aware of their own limitations in diagnosing disease outbreaks and in recommending treatment. In this connection he recommended that the veterinary medical profession and the formula feed manufacturers in Canada would do well to "arrive at a common meeting of minds" and remove misinterpretations and misunderstandings now prevalent. He said that both groups are at fault to a degree.

Either by design or happy coincidence a large number of the delegates just happened to have brought their golf clubs, swim suits and other sports gear with them to the convention so the final day of the meeting was devoted to relaxation. This included a golf tournament, a scenic bus tour along the picturesque St. Lawrence River, swimming, bridge and other pleasant diversions. The meeting concluded with a dinner at which the golf prizes for the day were awarded and with dancing in the casino. The 1962 convention is scheduled to be held at Niagara Falls, Ont.

Cold Storage Unit For Poultry Planned

SAVANNAH, GA. — Construction of a million dollar cold storage facility to be used primarily for storing poultry and poultry products for export is expected to start shortly at the port of Savannah.

Gov. Ernest Vandiver made the announcement at a Ports Authority meeting in answer to efforts by poultry leaders to obtain such a facility, which the industry says it needs to spark a drive for more foreign business.

Construction is expected to be started by mid-summer with completion slated for about nine months later.

OHIO

(Continued from page 6)

ods with two different rations—a full feed of ground ear corn or a full feed of corn silage. This 2^2 factorial gives eight different treatments or combinations of periods and rations. Steers fed silage in the first period gained 1.48 lb. and those fed corn 2.35 lb. per head daily. In the second period, those continued on silage gained 1.96 lb. and those switched from corn to silage gained 1.87 lb. Steers continued on corn gained 2.46 lb. and those changed from silage to corn 2.77 lb. per head per day. At the start of the third period some steers are again continued on their present ration and others are changed from one to the other. Three steers from each treatment are slaughtered at the end of each period to determine carcass composition at that time.

BREEDING EXPERIMENTS REPORTED—A progress report of a selection experiment with Hereford cattle was presented. Area of rib eye, reported to be 70% heritable, is the trait under selection in this experiment. Results to date are limited but differences between many of the sires tested have been small. Preliminary analyses show some positive correlation between weight per day of age and amount of fat trim in the carcass. Thus, there appears to be little danger of producing cattle which will not fatten when cattle within a herd are selected for weight per day of age.

The objectives of a Hereford-Charolais crossbreeding and management experiment were discussed and a sample of cattle and carcasses exhibited. The objectives of this experiment are to measure the effects of hybrid vigor in crosses of these two breeds and to study their value when: (1) calves are creep fed, fattened in dry lot and slaughtered at 12 to 14 months of age, or (2) calves are not creep fed, wintered, grazed, fattened in dry lot and slaughtered at 18 to 20 months of age.

TAX

(Continued from page 6)

of Florida Citrus Mutual, said he would ask Gov. Farris Bryant of Florida and Agriculture Commissioner Doyle Conner to try to work the matter out to the mutual satisfaction of both states.

In Florida, Gov. Farris Bryant said he is confident Georgia and Florida can settle the dispute without getting into a tax and counter-tax tussle. He said he would confer with Gov. Vandiver, of Georgia, in about two weeks.

Threats of a counter-tax were heard from Florida. Officials pointed out that the state can levy a retaliatory tax on Georgia peaches, corn, hams and pecans.

Eggs Mentioned

The egg industry was brought into focus by Sen. James Connor, of Brooksville, Fla., who charged that Georgia's threat of taxes on citrus is really a move toward lifting the requirement that imported eggs must be labeled as "shipped" eggs. If the egg restrictions were to be lifted, he said, Georgia could send eggs into Florida labeled as "fresh" when they had been chilled.

However, he said, if Georgia did levy a tax on citrus he would urge the governor to call the legislature into special session to tax Georgia's products.

"Georgia exports to Florida far exceed Florida's citrus imports," he said.

Mr. Connor pointed out that the Florida law on tagging broilers applies equally to all states and that Florida poultrymen have to comply with the inspection and tagging laws the same as any other state.

MARKETS

(Continued from page 2)

has developed and that farmers, having completed their long-delayed plowing and planting, are now able to turn their attention to the feeding of their cattle and poultry.

As one feed manufacturer commented: "It has been a mighty discouraging spring, both for us and for the farmers, but it now appears that better times are ahead for both groups."

It remains to be seen whether this bright outlook will be sustained, in view of the decline this week in prices for poultry and eggs, with supplies having been more than sufficient to meet retail requirements. Nonetheless, manufacturers are noting a steady upturn in orders for egg mashes and starter feeds for turkeys, while orders for hog feeds are presently in higher tonnages than they had been during any previous week this year.

Pacific Northwest

Oregon, Washington and Idaho formula feed movement this week varied little from that of the previous trading period.

The over-all picture appeared spotty with most volume in fryer, layer and turkey feeds.

Dairy and livestock feed transactions continued to be restricted by availability of excellent pasturage and new crop forage.

Feed-meat and egg price ratios continued unfavorable for most livestock and poultry classes, but very few prices declined this week and, some in fact, closed slightly higher.

Egg prices at Portland were mostly unchanged following several weeks of declines with AA extra large ones finishing at 32 to 36½¢ doz. f.o.b. Willamette Valley shipping points with AA large ones closing at 30 to 34½¢, same basis.

Vealers at North Portland closed unchanged following last week's $1 to $2 cwt. cut while choice steers, spring lambs and No. 1 grade butcher hogs all gained 25¢.

No. 1 grade frying chickens held unchanged at Portland after slipping to a new seasonal low the previous week and generally brought growers from 14 to 20½¢ lb.

Mountain States

Mountain states feed men report that business is improving but probably is not quite as good as this time last year.

Tonnage is increasing as the turkey crop grows bigger and is eating more. Cattle feed tonnage is also the highest so far this year.

Prices generally are steady with protein prices weaker and grains stronger.

Southern California

Many feed mills in Southern California report a general lack of new business. However, all mills are running a full 40-hour week with new production records being set by some mills in the heavy turkey producing areas particularly in the San Joaquin Valley.

For the third week in succession the broiler market declined with prices now ranging 12½¢ to 13¢, f.o.b. the ranch. With broiler hatchings increased over last year the growers cannot look forward to improved market conditions at least until fall.

Egg prices remain unchanged although increased feed costs continue to plague the net profit situation. Some producers have temporarily discontinued in business because of warm weather problems and no immediate market relief or help predicted.

Dairy farmers are smiling again as the price of milk in the Los Angeles area increased ½¢ per quart. The dairy feed business seems steady and unchanged from last month.

The general consensus among feed dealers in southern California is that production volume should remain very stable or increase slightly through the summer months. At the same time lower profits are forecast in comparison with the first six months of this year.

Milo and corn price advances brought a general rise in feed prices.

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North Carolina Eyes Bird Disposal Measure

RALEIGH, N.C.—A possibility exists that the North Carolina legislature may require commercial poultry farms to dispose of dead birds in burial pits or incinerators or face the penalties of marketing restrictions.

Industry representatives have suggested to the legislators that measures be passed requiring use of pits or incinerators in order to obtain a certificate of compliance. Failure to comply would result in quarantine of premises, and processors, egg receiving stations, hatcheries and egg brokers would be prohibited from buying from any grower not having a certificate of compliance.

The proposed law would not apply to non-commercial growers and those with less than 200 birds.

The matter came to a head recently when the Asheville Agricultural Development Council passed a resolution condemning indiscriminate disposal of dead birds on roofs of chicken houses, in streams and along the roadside.

Washington Merger

MONROE, WASH.—Merger of Valley Feed Company and Wolfkill Feed & Fertilizer Corp., both of Monroe, has been announced. Under the new arrangement, the two firms will operate as Wolfkill Feed & Fertilizer Corp., with M. V. (Bud) Wolfkill as president and general manager; M. C. (Merv) Wilcoxen, vice president and feed department manager, and V. J. Wolfkill as secretary-treasurer and office manager.

Reason for the merger, according to the announcement, was that two firms can better serve the trading area more economically. All facilities will be retained, including the distribution of Fisher's and Albers feeds, and continuation of Valley Made feed lines along with the Wolfkill and Shur-Crop brands.

"We are confident that increased savings and greater efficiency will be available to consumers as a result of this merger," Mr. Wolfkill stated.

He added that the Valley Feed plant will be closed out and will operate solely from the Wolfkill Feed & Fertilizer headquarters in the Monroe Shopping Center.

Fire Loss $100,000

WILLIAMS, CAL.—A $100,000 fire here has destroyed a storage shed and 2,500 tons of baled alfalfa hay belonging to the Endeman Feed & Pellet Mill, according to Clyde Endeman, president of the firm.

The recently completed pellet mill of the firm was not damaged.

Enzyme Boosts Gains Of Calves on Starter

MADISON, WIS.—Bacterial protease, a protein-digesting enzyme, increased rate of gain of dairy calves by about 10%, dairy researcher J. W. Rust of Iowa State University reported at the meeting of the American Dairy Science Assn.

Prof. Rust said 96 calves were used in three experiments at Ames. The increased gains and increased efficiency of feed utilization occurred among calves whose dry starter ration contained 40 to 50 mg. of a commercial bacterial protease concentrate per pound of starter.

These calves received whole milk until they were either 4 or 7 weeks old. The dry starter was available free choice from 3 days of age. In two experiments the calves drank, on the average, 187 lb. of whole milk per animal in their first 4 weeks.

In another test the milk consumption was 388 lb. in 7 weeks.

Prof. Rust said increasing the amount of protease to 100 mg. per pound of starter depressed growth of the calves under three months of age.

Use of two starch-digesting enzymes failed to have any effect on growth of the calves, Prof. Rust reported.

MILLING FIRM BURNS

OCONTO, WIS.—The Oconto Milling Co. was destroyed by fire recently.

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